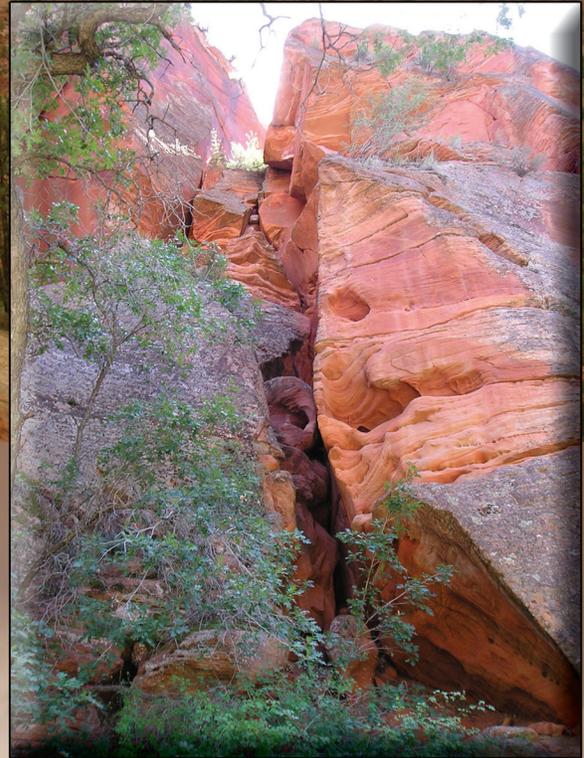


# Kanab Field Office Record of Decision and Approved Resource Management Plan

BLM



Kanab Field Office



October 2008

# **BLM Mission**

**To sustain the health, diversity, and productivity of the public lands for the use and enjoyment of present and future generations.**



**Bureau of Land Management**

**BLM-UT-PL-09-006-1610**

**UT-110-2007-022**



## United States Department of the Interior

### BUREAU OF LAND MANAGEMENT

Utah State Office  
P.O. Box 45155  
Salt Lake City, UT 84145-0155  
<http://www.blm.gov>



IN REPLY REFER TO:  
1610  
(UT-935)

Dear Reader/Interested Party:

I am pleased to announce that, after several years of hard work and collaborative efforts, the Kanab Field Office Resource Management Plan (Approved RMP) is complete. This document will provide guidance for the management of over 554,000 acres of public land and an additional 167,000 acres of Federal mineral estate administered by the Bureau of Land Management (BLM) in Kane and Garfield Counties in south-central Utah.

The attached Record of Decision (ROD) and Approved RMP have been prepared in accordance with the Federal Land Policy and Management Act (FLPMA) and the National Environmental Policy Act (NEPA). The ROD/Approved RMP are available to members of the public and will be sent to pertinent local, State, Tribal and Federal government entities. The Approved RMP finalizes the proposed decisions presented in the Proposed RMP/Final Environmental Impact Statement (FEIS) that was released on July 18, 2008 and subject to a 30-day protest period that ended on August 18, 2008. Fourteen protest letters with standing were received. The protests were reviewed by the BLM Director in Washington, D.C. After careful consideration of all points raised in these protests, the Director concluded the responsible planning team and decision makers followed all applicable laws, regulations, policies, and pertinent resource considerations in developing the Proposed RMP/Final EIS. Minor adjustments or points of clarification are incorporated into the Approved RMP in response to issues raised in the protest process and final BLM review. These minor changes are discussed in the ROD under the section titled *Notice of Modifications and Clarifications*, but the protest review did not result in any significant changes from the Proposed RMP.

The approval of this ROD by the Department of the Interior (DOI) Assistant Secretary for Land and Minerals Management serves as the final decision by the DOI for all land use planning and implementation-level decisions described in the attached Approved RMP. Implementation of land use plan decisions (e.g., coal leasing, oil and gas development, and land and realty decisions) will not be undertaken without suitable further NEPA analysis, including all appropriate public involvement and any hearings available to the public.

Notification of the approval of this ROD/Approved RMP will be announced via local news releases and on the Kanab Field Office website at:

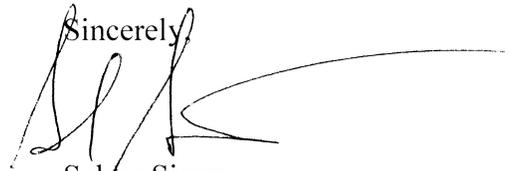
<http://www.blm.gov/ut/st/en/fo/kanab.html>

Hard copies and CD-ROM versions of the ROD and Approved RMP may be obtained by contacting the Kanab Field Office by phone at (435) 644-4600, or at the following address:

Kanab Field Office  
318 North 100 East  
Kanab, UT 84741

The BLM is pleased to provide this copy of the Kanab Field Office ROD/Approved RMP for your reference. We greatly appreciate all who contributed to the completion of this Approved RMP, including the State of Utah, Kane and Garfield Counties, and the Kaibab Paiute Tribe who were our Cooperating Agencies on this plan over the years, as well as other Federal agencies that worked closely with us to complete this important effort. We also appreciate the extensive public involvement during this time by groups, organizations, and individuals. Public input informed and improved the planning documents and we hope you will continue to work with us as we implement the decisions in this Approved RMP.

Sincerely,

A handwritten signature in black ink, appearing to read 'Selma Sierra', with a long horizontal flourish extending to the right.

Selma Sierra  
Utah State Director

**KANAB FIELD OFFICE  
RECORD OF DECISION  
AND  
APPROVED  
RESOURCE MANAGEMENT PLAN**

October 2008

*Prepared by:*

U.S. Department of the Interior  
Bureau of Land Management  
Kanab Field Office  
Kanab, Utah

*Cooperating Agencies:*

State of Utah  
Kane County  
Garfield County  
Kaibab Paiute Tribe

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## LIST OF ACRONYMS

ACEC	Area of Critical Environmental Concern
ACHP	Advisory Council on Historic Preservation
ADC	Animal Damage Control
AML	Appropriate Management Level
AMLIS	Abandoned Mine Land Inventory System
AMP	Allotment Management Plan
APD	Application for Permit to Drill (an oil or gas well)
APHIS	Animal and Plant Health Inspection Service (USDA)
ARPA	Archeological Resource Protection Act (of 1979)
AUM	Animal unit month
BA	Biological Assessment
BCC	Birds of Conservation Concern
BCF	Billion cubic feet (a measure of quantity of natural gas)
BIA	Bureau of Indian Affairs
BLM	Bureau of Land Management
BMP	Best Management Practice
BO	Biological Opinion
BOR	(United States) Bureau of Reclamation
CAA	Clean Air Act (of 1970)
CAAA	Clean Air Act Amendments
CBNG	Coal Bed Natural Gas
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act (of 1980)
CFR	Code of Federal Regulations
CFS	Cubic Feet Per Second (a unit of water flow)
CHL	Combined Hydrocarbon Lease
CLDQ	Cleveland-Lloyd Dinosaur Quarry
CO	Carbon Monoxide
COA	Conditions of Approval
CRMP	Cultural Resource Management Plan
CSU	Controlled Surface Use
CWA	Clean Water Act (of 1977)
CWD	Chronic Wasting Disease
CWMA	Cooperative Weed Management Area
DEIS	Draft Environmental Impact Statement
DFC	Desired Future Condition
DOGMM	(Utah) Division of Oil, Gas and Mining
DOI	(United States) Department of the Interior
DPC	Desired Plant Community
DWFC	Desired Wildland Fire Conditions
EA	Environmental Assessment
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency

EPCA	Energy Policy and Conservation Act (of 1975)
ERMA	Extended Recreation Management Area
ESA	Endangered Species Act (of 1973)
ESR	Emergency Stabilization and Rehabilitation
ESRI	Environmental Systems Research Institute (makers of GIS software)
FEIS	Final Environmental Impact Statement
FERC	Federal Energy Regulatory Commission
FLPMA	Federal Land Policy and Management Act (of 1976)
FMP	Fire Management Plan
FMZ	Fire Management Zone
FO	Field Office
FR	Federal Register
FRCC	Fire Regime Condition Class
FWMP	Forest and Woodlands Management Plan
GAP	Geographical Analysis Program
GIS	Geographic Information Systems
GY	Grazing Year
HAP	Hazardous Air Pollutants
HFRA	Healthy Forests Restoration Act (of 2003)
HMA	Herd Management Area
HMAP	Herd Management Area Plan
HMP	Habitat Management Plan
HUC	Hydrologic Unit Code
IBLA	Interior Board of Land Appeals
IMP	Interim Management Policy
ISA	Instant (Wilderness) Study Area
KFO	Kanab Field Office
KPA	Kanab Planning Area
KGS	Known Geologic Structure
KRCRA	Known Recoverable Coal Resource Area
LTA	Land Tenure Agreement
LUP	Land Use Plan
LWCF	Land and Water Conservation Fund
MBTA	Migratory Bird Treaty Act (of 1918)
MCF	Thousand cubic feet
MFP	Management Framework Plan (pre-FLPMA BLM land use plan)
MLRA	Major Land Resource Area
MMCF	Million cubic feet
mmhos/cm	Millimhos per centimeter (in soils, a measure of electrical conductivity)
MOU	Memorandum of Understanding
MSA	Management Situation Analysis
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act (of 1990)
NEPA	National Environmental Policy Act (of 1969)
NHL	National Historic Landmark
NHPA	National Historic Preservation Act

NHS	National Health Services
NNL	National Natural Landmark
NOX	Nitrogen Oxides
NO <sub>2</sub>	Nitrogen Dioxide
NOA	Notice of Availability (published in the Federal Register)
NOI	Notice of Intent (published in the Federal Register)
NOSR2	Naval Oil Shale Reserve Number 2
NPS	National Park Service
NRA	National Recreation Area
NRCS	Natural Resource Conservation Service
NRHP	National Register of Historic Places
NSO	No Surface Occupancy (a stipulation on an oil and gas lease)
NWSRS	National Wild and Scenic River System
OHV	Off-Highway Vehicle
ORV	Off Road Vehicle (an older acronym, replaced by OHV)
PAH	Polyaromatic Hydrocarbons
PFC	Proper Functioning Condition (of riparian/wetland areas)
PFO	Price Field Office
PIF	Partners-in-Flight
PM	Particulate Matter
PM <sub>2.5</sub>	Particulate Matter (less than 2.5 microns in diameter)
PM <sub>10</sub>	Particulate Matter (less than 10 microns in diameter)
PMP	Population Management Plan
PRMA	Price River Management Area
PSD	Prevention of Significant Deterioration
R&I	Relevance and Importance
R&PP	Recreation and Public Purposes (Act of 1926)
RAMP	Recreation Area Management Plan
RCA	Raptor Concentration Area
RCRA	Resource Conservation and Recovery Act (1976)
RDCC	(Utah) Resource Development and Coordinating Committee
RFA	Reasonably Foreseeable Action (or Activity)
RFD	Reasonably Foreseeable Development
RFFA	Reasonably Foreseeable Future Actions
RHS	Rangeland Health Standards
RMA	Recreation Management Area
RMIS	Recreation Management Information System
RMP	Resource Management Plan (BLM land use plan under FLPMA)
RNA	Research Natural Area
ROD	Record of Decision
ROS	Recreation Opportunity Spectrum
ROW	Right of Way
S&G	Standards & Guidelines
SARA	Superfund Amendment Reauthorization Act
SHPO	State Historic Preservation Officer
SITLA	(Utah) School and Institutional Trust Lands Administration

SOX	Sulfur Oxides
SO <sub>2</sub>	Sulfur Dioxide
SRMA	Special Recreation Management Area
SRP	Special Recreation Permit
SRRMP	San Rafael Resource Management Plan
SUWA	Southern Utah Wilderness Alliance
T&E	Threatened and/or Endangered (species as per ESA of 1973)
TDS	Total Dissolved Solids
TL	Timing Limitations
TMDL	Total Maximum Daily Load
TPY	Tons Per Year
TSCA	Toxic Substances Control Act (of 1976)
UAAQS	Utah Ambient Air Quality Standards
UAC	Utah Administrative Code
UDA	Utah Division of Aeronautics
UDAQ	Utah Department of Air Quality
UDEQ	Utah Division of Environmental Quality
UDOGM	Utah Division of Oil, Gas, and Mining
UDOT	Utah Department of Transportation
UDWaR	Utah Division of Water Resources
UDWQ	Utah Division of Water Quality
UDWR	Utah Division of Wildlife Resources
UGS	Utah Geological Survey
UP&L	Utah Power and Light
USFWS	United States Fish and Wildlife Service
USC	United States Code
USDA	United States Department of Agriculture
USFS	United States Forest Service
USGS	United States Geological Survey
VRI	Visual Resource Inventory
VRM	Visual Resource Management
WAFWA	Western Association for Fish and Wildlife Agencies
WMA	Wildlife Management Area
WSA	Wilderness Study Area
WSR	Wild and Scenic River(s) (Act of 1973)
WUG	Western Utility Group
WUI	Wildland Urban Interface

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## RECORD OF DECISION

### A. INTRODUCTION

This Record of Decision (ROD) approves the Bureau of Land Management's (BLM's) proposal to manage the public lands within the Kanab Field Office (KFO) as presented in the attached Resource Management Plan (RMP). This RMP was described as the Proposed RMP in the July 2008 Kanab Field Office Proposed RMP and Final Environmental Impact Statement (EIS) [USDI-BLM-2008] with minor adjustments and clarifications which are explained later in this ROD. This ROD provides the background on development of the plan and rationale for approving the decisions contained in the Proposed RMP, and describes the clarification and/or modifications made to address protests received on the plan. The attached Kanab Field Office RMP (also referred to as the Approved RMP) includes the decisions themselves.

#### **Purpose and Need**

##### **Purpose**

The Federal Land Policy and Management Act of 1976 (FLPMA) requires that the BLM "develop, maintain, and when appropriate, revise land use plans" (43 United States Code [U.S.C.] 1712(a)). The BLM has determined that it is necessary to revise existing land use plans (LUP) and prepare a new RMP for the KFO based on a number of new issues that have arisen since preparation of the existing plans. In general, the purpose of this RMP is to:

- Ensure that public lands are being managed according to the principles of multiple use and sustained yield
- Provide an overview of goals, objectives, and needs associated with public land management
- Resolve multiple-use conflicts or issues between resource values and resource uses
- Consolidate the existing five LUPs and their amendments.

The resulting Kanab RMP will establish consolidated guidance and updated objectives and management actions for the public lands in the decision area. The RMP will be comprehensive in nature and will address issue categories that have been identified through agency, interagency, and public scoping efforts.

##### **Need**

Since completion of the existing LUPs, considerable changes have occurred within the planning area that have resulted in existing plans needing new or additional program direction in some areas. The three key changes necessitating a new RMP are: (1) changes in policy; (2) changes in resource conditions, uses, or demands; and (3) changes in administrative boundaries of the planning area. The following provides a brief summary of these key changes.

##### **Changes in Policy**

National-level BLM policies have been revised since completion of the existing LUPs. Such changes in policy include the development of Utah Standards for Rangeland Health and Guidelines for Grazing Management; revisions in cultural and paleontological resources management; new special status species listings; development of a statewide riparian policy; a

new Executive Order addressing Migratory Bird Treaty Act compliance; implementation of the Energy Policy and Conservation Act, as amended (EPCA) and the Energy Policy Act of 2005; off-highway vehicle (OHV) use and management, soil, water, and air management. This current planning process will allow for these policies to be integrated into the new RMP.

### **Changes in Resource Condition or Demands**

Since completion of the existing LUPs there have been changes in resource conditions or demand for resource use. Many of the changes were identified in a Special Evaluation Report completed in 2002 by the KFO (BLM 2002a), which concluded that some of the decisions within the existing LUPs are in need of revision. For example, OHV use has substantially increased throughout the planning area, increasing the potential for impacts on resources and conflicts with other uses. There are several species that have been federally listed under the Endangered Species Act (ESA), critical habitat designated, and other special status species identified since the existing plans were developed. In addition, changes in resource use levels and patterns have created areas of conflict between resource protection and resource uses. This planning effort will provide new management direction to address existing and foreseeable changes to resource conflicts, conditions, and demands.

### **Changes in Administrative Boundaries**

The need for this planning effort, as noted above, is partly due to changes in administrative boundaries since the existing LUPs were completed. Land transfers, realignment of BLM administrative units, and the designation of Grand Staircase–Escalante National Monument (GSENM) have changed the land ownership and land use patterns throughout the planning area. This planning effort will update resource management and use allocations based on these new managerial responsibilities and the associated impacts these changes have on land use patterns.

### **Description of the Decision Area**

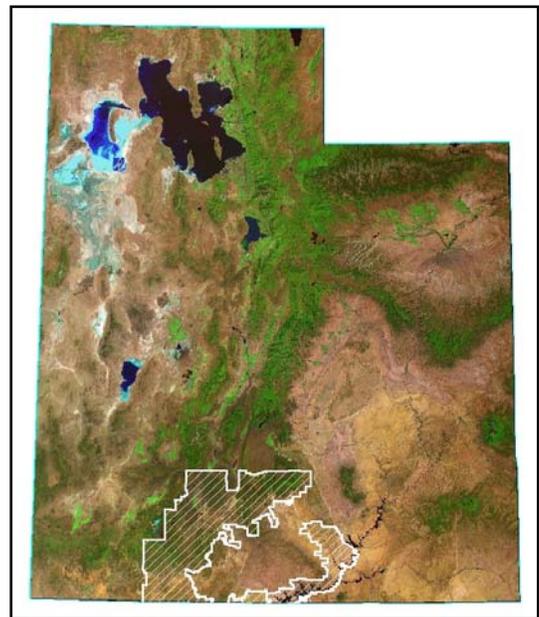
The BLM Land Use Planning Handbook (H-1601-1) differentiates between geographic areas associated with planning. They include the planning area and decision area.

### **Planning Area**

The planning area is the region within which the BLM makes decisions during a planning effort. A planning area boundary includes all lands regardless of jurisdiction; however, the BLM will make decisions only on lands that fall under BLM jurisdiction (including subsurface minerals). Figure 1 shows the planning area in relation to the State of Utah.

The planning area is located in south-central Utah and is bordered by Piute and Wayne counties on the north, Washington County and Zion National Park on the west, Arizona on the south (including a boundary with the Kaibab-Paiute Tribe Reservation), and Capitol Reef National

**Figure 1. Kanab RMP Planning Area**



Park and Glen Canyon National Recreation Area (NRA) on the east. The planning area also includes the Utah portion of the Paria Canyon–Vermilion Cliffs Wilderness, which is administered by the KFO. Major drainages in the planning area include the North Fork of the Virgin River, Orderville Gulch, East Fork of the Virgin River, Kanab Creek, Sevier River, Paria River, Birch Creek, and North Creek (Escalante River). Elevations range from more than 10,000 feet northeast of the town of Escalante to about 4,500 feet at the Barracks along the East Fork of the Virgin River. Intermingled with and adjacent to BLM-administered lands are resources of national and international significance, including Bryce Canyon National Park, Zion National Park, the North Rim of the Grand Canyon, Glen Canyon NRA, Pipe Spring National Monument, Cedar Breaks National Monument, GSENM, Grand Canyon–Parashant and Vermilion Cliffs National Monuments, Kodachrome Basin State Park, Escalante Petrified Forest State Park, and Coral Pink Sand Dunes State Park.

The planning area contains historical communities, diverse terrains, scenic landscapes, and recreational attractions which figure prominently in the settlement, history, culture, and enjoyment of southern Utah. Traditional occupational pursuits historically associated with Utah include farming, ranching, mining, tourism, retail trade, transportation, and construction. Major transportation routes include U.S. Highway 89, State Route 9, State Route 14, State Route 12, Johnson Canyon/Glendale Bench Road, Yellowjacket Road, Hancock Road, Posey Lake Road, and Upper Cottonwood Canyon Road.

## **Decision Area**

This includes the lands within a planning area for which the BLM has authority to make land use and management decisions. The BLM directly manages all BLM-administered public lands (surface and subsurface). The BLM also manages mineral operations on those federal lands managed by other federal agencies. In addition, it manages mineral operations on split estate lands where a private or other non-federal party (state) owns the surface while the Federal Government owns the subsurface minerals. The Kanab RMP will not include any planning and management decisions for areas where the land surface and minerals are both privately owned or owned by the State of Utah or local governments. For the purposes of this document, the decision area refers to all BLM-administered surface (Map 1) and subsurface.

Of approximately 2,847,200 acres of land within the planning area, this RMP will make decisions for the BLM surface estate and the federal mineral estate managed by the KFO (Table 1 and Map 1).

**Table 1. Land and Minerals Ownership within the Planning Area**

<b>Jurisdiction</b>	<b>Acres<sup>1</sup></b>
Total BLM-administered federal land surface to be covered by RMP decisions	554,000
Total land surface area in the Kanab RMP planning area (all ownerships) <sup>1</sup>	2,847,200
Split Estate Federal Minerals (All Minerals)	167,000
Split Estate Federal Minerals (Coal Only)	75,000
Split Estate Federal Minerals (Oil and Gas Only)	10,000
Split Estate Federal Minerals (Geothermal Only)	110

Jurisdiction	Acres <sup>1</sup>
Split Estate Federal Minerals (Other Minerals)	13,800
Notes: 1 - Because of land surface and mineral ownership overlaps and administrative responsibility overlaps, acreage figures are not additive. For the purpose of the Kanab RMP, where one or more of the mineral resource categories are federally owned, the acres are listed as if all minerals in the area were federally owned. Where mixed minerals ownership occurs (for example, privately owned oil and gas, overlapping with federally owned coal in the same area), minerals planning and management decisions in the RMP will pertain only to the federally owned minerals.	

Sources: Kanab BLM Geographic Information System (GIS) Program, LR2000

In areas where the land surface is privately owned or owned by the State of Utah or local governments and the minerals are federally owned, the RMP will include planning and management decisions for only the BLM-administered federal mineral estate. The land and resource uses and values on the non-federal surface will be taken into account in the impact analysis and will affect development of the federal minerals. However, the RMP decisions will not pertain to non-mineral state and private actions on non-federal surface.

In areas where the federal land surface is administered by the United States Forest Service (USFS), the National Park Service (NPS), or other federal agencies and the federal mineral estate is administered by the BLM, the land surface planning and management decisions are the responsibility of these “other” federal surface management agencies. BLM administrative responsibilities within these areas (for example, actions concerning the federal mineral estate) are handled on a case-by-case basis and are guided by the other surface management agencies’ policies, procedures, and plans when applying stipulations or restrictions.

## **B. OVERVIEW OF THE ALTERNATIVES**

Four alternatives, including a No Action Alternative, were analyzed in detail in the Kanab Draft RMP/EIS October 2007 and in the Proposed RMP/Final EIS July 2008. The alternatives were developed to address major planning issues and to provide direction for resource programs influencing land management. All alternatives incorporated the Utah Standards for Rangeland Health and the Guidelines for Grazing Management for BLM Lands in Utah, developed in conjunction with the Utah Resource Advisory Council (RAC) as base standards for assessing land health. All management under any of the alternatives would comply with federal laws, rules, regulations, and policies. Mitigation has been incorporated in the development of all alternatives.

Each alternative emphasized a different combination of resource uses, allocations, mitigation measures, and restoration measures to address issues and resolve conflicts among uses, so program goals were met in using a variety of approaches across the alternatives. However, each alternative allowed for some level of support of all resources present in the planning area. The alternatives differed in how fast the goals would be met, the degree to which they would be met, the emphasis placed on certain programs and activities, and whether active or passive management would occur. Management scenarios for programs not tied to major planning issues and/or mandated by law often contain minor or no differences in management between alternatives.

Alternative A (the No Action Alternative) is the continuation of the *Escalante Management Framework Plan (MFP) (1981)*; *Paria MFP (1981)*; *Vermilion MFP (1981)*; *Zion MFP (1981)*, and *Cedar-Beaver-Garfield-Antimony Resource Management Plan (RMP) (1986)* and is provided as a baseline for comparison. Alternative C is considered the environmentally preferable alternative, offering the most intensive, active management for protection of the area's natural and biological values and favors natural systems over commodities development, including protecting all non-WSA lands BLM found to have wilderness characteristics. Alternative D emphasizes commodity development and provides the greatest economic benefit from mineral development, and imposes the fewest restrictions on public land uses. Alternative B, (the Preferred Alternative in the Draft RMP/EIS and largely the baseline for the Proposed Plan in the PRMP/FEIS) best achieves a balance between environmental protection and use of public land resources. General overviews of these alternatives and comparisons among them are provided below.

### **Alternative A (No Action)**

Alternative A is referred to as the No Action Alternative. This alternative would have continued present management practices defined in the five existing land use plans and the emergency OHV restriction orders (BLM 2000, BLM 2005). Direction contained in existing laws, regulations, and policies would have continued to be implemented, sometimes superseding provisions of the five existing plans. Alternative A was not selected because it does not meet the purpose and need for the management of public lands under the jurisdiction of the Kanab FO. The decisions made by the 1981 MFP's and 1986 RMP are largely based on outdated information. Equally as important, these decisions do not meet changing uses, trends, and conditions that have occurred since that time. The plans do not address many recent issues, nor do they address the increased levels of controversy some existing issues are facing. Special status species, including threatened and endangered species, are not fully addressed within the parameters of Alternative A. Alternative A designates 466,600 acres as open to OHV use. This large open acreage within the planning area results in unacceptable resource damage which is contrary to BLM policy. The No Action Alternative would continue the designation of the one existing ACEC, but does not evaluate new ACECs. In addition, this alternative does not recommend suitable wild and scenic river segments, or consider non-WSA lands with wilderness characteristics to protect and preserve their wilderness characteristics.

### **Alternative B (Preferred)**

Alternative B was selected as the BLM's Preferred Alternative in the Kanab Draft RMP/EIS. This alternative represents the mix and variety of management actions, based on BLM's analysis and judgment, which best resolve the resource issues and management concerns while accommodating BLM's values, programs, and policy. As a result of public comment, internal review, and cooperating agency coordination on the Draft RMP/EIS, Alternative B was modified to become the Proposed Plan and analyzed in the Final EIS. With minor adjustments and clarification, upon signature of this Record of Decision, it becomes the Approved RMP.

## **Alternative C**

Alternative C emphasizes protection of wildlife habitats, natural resources, ecosystems, and landscapes. Commodity production and human activities would be more constrained. This alternative provides more opportunities for non-motorized recreation. Compared to all alternatives, Alternative C protects the most land area for sensitive resources, designates the most Areas of Critical Environmental Concern (ACECs), finds all eligible Wild and Scenic River segments suitable, and protects, preserves and maintains non-WSA lands with wilderness characteristics. It is also the most restrictive to OHV use and all surface disturbing activities (including oil and gas leasing). Although Alternative C is the environmentally preferable alternative, there are many uses that are overly restricted by the decisions in this alternative. The rationale for not selecting Alternative C is outlined below for the major management actions.

**Lands and Realty:** In Alternative C, 255,200 acres are managed as exclusion areas for rights-of-way and 3,400 acres are managed as avoidance areas for rights of way. Managing 47 percent of the planning area with major restrictions on BLM rights-of-way for pipelines, roads and powerlines could severely limit development of and access to existing oil and gas leases as well as restricting the development of other necessary infrastructure.

**Minerals:** Alternative C manages oil and gas leasing and other surface disturbing activities with the following stipulations: Closed -- 72,600 acres; No Surface Occupancy (NSO) -- 83,100 acres; Timing Limitations/Controlled Surface Use -- 269,900 acres; Open (subject to standard terms and conditions) -- 28,400 acres. Alternative C is the most restrictive to oil and gas development and other surface disturbing activities, even in areas with high development potential for oil and gas. It has the least amount of acreage open under standard terms and conditions to oil and gas leasing. The acreage included in the Closed and No Surface Occupancy stipulation totals 46 percent of the acreage in the planning area that would be essentially unavailable to oil and gas development and other surface disturbing activities. The timing and controlled surface use stipulations in Alternative C would add another 49 percent of the planning area in which oil and gas development would be prohibited during certain times and subject to specified conditions for construction. Leasing of the public lands for oil and gas exploration and production is required by the Mineral Leasing Act of 1920 as amended and BLM's current policy is to apply the least restrictive management constraints to the principal uses of the public lands necessary to achieve resource goals and objectives. In total, about 95 percent of the planning area would be subject to restrictions above standard terms and conditions for development. This amount of acreage is unnecessarily restrictive to protect at-risk resources. The restrictions in this alternative do not meet the objectives of the Energy Policy and Conservation Act which directs BLM to minimize impediments to oil and gas leasing and development.

**Non-WSA Lands with Wilderness Characteristics:** Alternative C manages 89,780 acres to protect, preserve, and maintain their wilderness characteristics. These acres are closed to mineral leasing and development, rights-of-way, woodcutting, and all other surface disturbing activities. Management of non-WSA lands to preserve their wilderness characteristics would preclude potentially beneficial actions such as fuels and vegetation treatments and other healthy land initiatives, wildlife and range improvements, and the construction of recreation facilities. Many of the areas managed to protect wilderness characteristics in Alternative C have conflicts with

high development potential areas for oil and gas. The management of all the non-WSA lands with wilderness characteristics in Alternative C would be restrictive on other resources and uses of the public lands because extractive uses and rights of ways would be difficult to develop due to the restrictive decisions in these areas.

**Recreation:** Alternative C establishes seven Special Recreation Management Areas (SRMAs) which are to be managed to highlight non-motorized activities, generally. In addition, nine Recreation Management Zones within these SRMAs emphasize various types of non-motorized recreation. The Kanab planning area is known for a multitude of recreational activities, attracting about 200,000 visitors a year. These visitors engage in numerous activities not provided for in Alternative C such as many forms of motorized activity (jeeping, dirt biking, ATVing). Alternative C does not provide for the full range of recreational activities known to occur in the planning area or for many of the businesses that depend upon these activities.

**Special Designations – Areas of Critical Environmental Concern:** Alternative C designates all five areas determined to have relevant and important values as Areas of Critical Environmental Concern (ACECs). Management of four of these potential ACECs in Alternative C is unnecessary to protect the relevant and important values. For example, the relevant and important value of cultural resources in the White Cliffs potential ACEC is protected by applying a closed to leasing stipulation for oil and gas leasing due to management of non-WSA lands with wilderness character. In addition, many ACECs overlap with WSAs where relevant and important values are already protected through IMP management. The multiple special designation layering is duplicative and unnecessary where relevant and important values are already protected through Interim Management Policy.

**Special Designations – Wild and Scenic Rivers:** Alternative C recommends as suitable all river segments found eligible for potential designation into the National Wild and Scenic River system. Many of the river segments found suitable in Alternative C include scenery and river related non-motorized recreational activities as outstandingly remarkable values (ORVs). Scenery and non-motorized recreational activities, especially non-boating activities, are more amenable for management by other means, such as SRMAs, WSAs and management for non-WSA lands with wilderness characteristics. As a consequence, Alternative C would impose unnecessary restrictions that provide no additional management protections that are not otherwise available through existing or alternative management options.

**Travel Management:** Alternative C designates no areas for open OHV use, and therefore does not meet the needs of all recreational users, such as cross country motorized travel. Alternative C closes 30 percent of the land managed by the field office to OHV use.

**Wildlife:** Alternative C provides the maximum protection for wildlife habitats by utilizing the most inclusive habitats for various species. In addition, Alternative C is the most restrictive to uses within these broader habitats. The timing limitations imposed in Alternative C are longer and cover larger acreages than are necessary for sustaining the species.

In summary, this alternative would not provide adequate or balanced consideration of existing uses such as motorized recreational activities, economic land uses such as rights-of-way, energy corridors, or access to mineral development. Adoption of this alternative could also preclude the

consideration of possible future development of renewable energy resources. This Alternative is inconsistent with existing state and local plans; conflicts with the intent of Federal legislation including Energy Policy and Conservation Act and the Energy Policy Act, and it does not give adequate consideration to local needs, customs and culture.

### **Alternative D**

Alternative D emphasizes commodity production and human activities, which would be less constrained in Alternative D than in other alternatives. Alternative D, like Alternative A, designates no areas as ACECs, no suitable Wild and Scenic River segments, and no acres managed as non-WSA lands with wilderness characteristics. Other than Alternative A, Alternative D provides more opportunities for motorized recreation, is the least restrictive to OHV use and all surface disturbing activities (including oil and gas leasing). Alternative D does not provide sufficient restrictions on uses to protect important natural resources. For these reasons, this alternative did not achieve the balance between resource protection and resource use that provides enhancement of resource use and conditions. The rationale for not selecting Alternative D is outlined below for the major management actions.

**Lands and Realty:** In Alternative D, 75,200 acres (all within designated wilderness and WSAs) are managed as exclusion areas for rights-of-way and no acres are managed as avoidance areas for rights of way. The exclusion areas for designated wilderness and WSAs are non-discretionary, and identifying no acres of avoidance areas is not sufficient to adequately protect the important natural resources that have been identified within the planning area. In particular, the exclusion areas in Alternative D are not sufficient to protect sensitive visual resources, heavily used recreation areas, sage grouse leks and habitats, and the relevant and important values in potential ACECs.

**Livestock Grazing:** Alternative D allows grazing on the Water Canyon Allotment (48 animal unit months-AUMs) which has been identified as conflicting with protecting the culinary water system of Fredonia, Arizona, (which uses surface water collection as part of the system). Alternative D was not selected because, under this alternative, this issue would remain unresolved.

**Minerals:** Alternative D manages oil and gas leasing and other surface disturbing activities with the following stipulations: Closed -- 75,100 acres (all non-discretionary since it is entirely within designated wilderness and WSAs); No Surface Occupancy -- 23,000 acres; Timing Limitations/Controlled Surface Use -- 64,600 acres; Open (subject to standard terms and conditions) -- 391,300 acres. Alternative D is the least restrictive to oil and gas leasing and other surface disturbing activities. Alternative D has the most acreage open subject to standard terms and conditions. Although the oil and gas restrictions are more conducive to development, they are not sufficient to protect the important resources identified within the planning area. In particular, the NSO acreage in Alternative D is not sufficient to protect the municipal watersheds of Fredonia, Arizona, sensitive visual resources, heavily used recreation areas, and the relevant and important values in potential ACECs.

**Non-WSA Lands with Wilderness Characteristics:** Alternative D manages no non-WSA lands with wilderness characteristics to protect, preserve, and maintain their wilderness characteristics. Therefore, the wilderness characteristic values identified in these areas could be potentially adversely affected.

**Recreation:** Alternative D establishes four SRMAs which are managed primarily to emphasize motorized activities. The Kanab planning area is known for a multitude of recreational activities, attracting about 200,000 visitors a year. These visitors engage in numerous non-motorized activities not specifically managed for in Alternative D such as hiking, horseback riding, backpacking, and mountain biking. The seven Recreation Management Zones in four SRMAs provided in Alternative D do not provide sufficient opportunities for these popular non-motorized activities. In Alternative D other heavily used recreation areas such as the North Fork Virgin River, would not be afforded the management as an SRMA, leading to inadequate management for recreational opportunities. Alternative D does not provide for the full range of recreational activities known to occur in the planning area or for many of the businesses that depend upon these activities.

**Special Designations – ACECs:** Alternative D does not designate any of the five areas determined to have relevant and important values as ACECs. The management prescriptions in Alternative D are not sufficient to protect the majority of the relevant and important values of these potential ACECs. For example, portions of the relevant and important value of scenery in the Cottonwood Canyon ACEC are managed as VRM Class III under Alternative D. This visual management class is not sufficient to protect the scenic values.

**Special Designations – Wild and Scenic Rivers:** Alternative D recommends none of the eligible river segments as suitable for potential designation as Wild and Scenic Rivers. As a result, Alternative D would not provide sufficient protection to many of the river segments found to have outstandingly remarkable values (ORVs). For example, the ORVs of scenery, wildlife, and recreation in North Fork Virgin River would not be protected in Alternative D and could be subject to adverse impacts from oil and gas development and other surface disturbing activities.

**Travel Management:** Alternative D designates only 27,600 acres (five percent) as closed to OHV travel, and leaves ephemeral washes open to cross country OHV use. While this alternative accommodates many motorized travel opportunities, it conflicts with other uses, including primitive recreation, and thus does not provide a travel plan that meets the needs of all users.

**Wildlife:** Alternative D provides the least protection for wildlife habitats by managing for the smallest amount of area for various species and applying the minimum timing limitations in these areas. The timing limitations imposed in Alternative D are shorter and cover less acreage than necessary for sustaining the species. For example, Alternative D requires no restrictions to oil and gas leasing and surface disturbing activities in mule deer, elk, and pronghorn habitat. Alternative D does not provide sufficient protection for wildlife habitats.

In summary, Alternative D was not selected primarily because it does not best achieve the mix of multiple uses necessary to fully implement the mandate of FLPMA. Adoption of this alternative would result in adverse impacts to wildlife, loss of primitive recreation opportunities, and would

have reduced management flexibility by foregoing a number of special designations such as ACECs, and WSRs. In addition, recreational opportunities provided through SRMA-focused management and the management of non-WSA lands with wilderness characteristics would be foregone.

### **Alternatives Considered but Eliminated from Detailed Analysis**

Several organizations and individuals provided components of alternatives and management actions as possible ways of resolving individual resource management issues and conflicts. However, none of the submissions address the purpose and need of this RMP revision, including the multiple-use requirements identified in FLPMA. While BLM considered components of some of the submissions in developing alternatives, none provided the full range of decisions required by the purpose and need.

#### **Vermilion Cliffs Heritage Plan**

The Vermilion Cliffs Heritage Plan was developed and/or endorsed by a number of state and national organizations and was provided to the BLM during the public scoping period. The Vermilion Cliffs Heritage Plan, as presented, incorporated many timely issues and concerns that would be required of any balanced approach to managing public lands. Specifically, the plan identifies several points to be considered during the route designation process and identifying stipulations to be attached to oil and gas leases. The BLM gave careful consideration to the Vermilion Cliffs Heritage Plan and incorporated parts of the plan into the range of RMP alternatives. While the Vermilion Cliffs Heritage Plan appears to be multiple use in nature, it does not meet the purpose and need for the RMP revision because it does not address all resource values and uses that the BLM is required to manage on public lands.

#### **Closing the Decision Area to Livestock Grazing**

An alternative that proposes to close the entire decision area to livestock grazing would not meet the purposes and need of this Approved RMP. NEPA requires that agencies study, develop, and describe appropriate alternatives to recommended courses of action in any proposal that involves unresolved conflicts concerning alternative uses of available resources. No issue or conflict has been identified during this land use planning effort that requires the complete elimination of grazing within the decision area for its resolution. Where appropriate, closures and adjustments to livestock use have been incorporated into the alternatives on an allotment or area basis to address issues identified in the RMP.

Because the BLM has considerable discretion through its grazing regulations to determine and adjust stocking levels, seasons of use, and grazing management activities and to allocate forage to uses of the public lands in RMPs, the analysis of an alternative to entirely eliminate grazing is not needed.

An alternative that proposes to close the entire decision area to grazing would also be inconsistent with the intent of the Taylor Grazing Act, which directs the BLM to provide for livestock use of BLM lands; adequately safeguard grazing privileges; provide for the orderly use, improvement, and development of the range; and stabilize the livestock industry dependent upon the public range.

FLPMA requires that public lands be managed on a “multiple use and sustained yield basis” (FLPMA Sections 302(a) and 102(7)) and includes livestock grazing as a principal or major use of public lands. While multiple use does not require that all lands be used for livestock grazing, complete removal of livestock grazing on the entire decision area would be arbitrary and would not meet the principle of multiple use and sustained yield.

Livestock grazing is and has been an important use of the public lands in the decision area for many years and is a continuing government program. Although the Council on Environmental Quality (CEQ) guidelines for compliance with NEPA require that agencies analyze the “No Action Alternative” in all EISs, for purposes of this NEPA analysis the “No Action Alternative” is to continue the status quo, which includes livestock grazing (CEQ Forty Most Asked Questions, Question 3). For this reason and those stated above, a no grazing alternative for the entire decision area has been dismissed from further consideration in this RMP.

### **Livestock Grazing Adjustments Alternative**

During scoping and comment on the Draft EIS it was suggested that the BLM consider adjustments to livestock numbers, livestock management practices, and the kind of livestock grazed on allotments within the Kanab Field Office in order to benefit wildlife and protect and promote land health including soils, hydrologic cycles, and biotic integrity.

BLM policy regarding adjustments to the levels of livestock use authorized is to monitor and inventory range conditions under existing stocking levels and make adjustments to livestock use as indicated by this data to help ensure that *Standards for Rangeland Health* and resource objectives are met. Regulations at 43 CFR 4130.3 require that the terms and conditions under which livestock are authorized “ensure conformance with the provisions of subpart 4180” (*Standards for Rangeland Health*) and further that “livestock grazing use shall not exceed the livestock carrying capacity of the allotment.” It would be inappropriate and unfeasible to estimate and allocate the available forage, design specific management practices, and determine if changes to the kind of livestock are necessary for each allotment in the Kanab Field Office or in the area as a whole in the Approved RMP. Such changes would not be supportable considering the type and amount of data required and the analysis necessary to make such changes.

According to BLM policy decisions regarding authorized livestock use, levels and the terms and conditions under which they are managed is an implementation decision (H-1610-1, Appendix C, page 15). BLM assesses the condition of rangeland health, conducts monitoring and inventories, and evaluates this data on a periodic basis, normally on an allotment and/or watershed basis. After NEPA analysis, necessary changes to livestock management and implementation of Utah’s *Guidelines for Rangeland Management* are implemented through a proposed decision in accordance with 43 CFR 4160. These decisions determine the exact levels of use by livestock in conformance with the LUP and to meet resource objectives and maintain or enhance land health. For these reasons this alternative has been dismissed from further consideration in this LUP revision.

## **No Leasing Alternative**

During scoping for the Draft RMP/EIS it was suggested that BLM should address a "No Leasing Alternative" and that No Leasing must be addressed because it is the "No Action Alternative" that must be analyzed in all EISs.

The "No-Leasing Alternative" in an RMP revision is actually an action alternative because where lands have already been leased, the no-action for NEPA purposes continues to allow for (honor) valid existing rights. Proposing a "No-Leasing Alternative" would require revisiting existing leases and either buying them back from the leasee, or allowing them to expire on their own terms. The first option (buying back), is outside the scope of any RMP. This is a political decision that BLM has no authority to undertake in planning. As a result, BLM does not regularly include a "No-Leasing Alternative."

The purpose and need for the land use plan is to identify and resolve potential conflicts between competing resource uses rather than to eliminate a principal use of the public lands in the Kanab Field Office Area. Leasing of the public lands for oil and gas exploration and production is required by the Mineral Leasing Act of 1920 as amended and BLM's current policy is to apply the least restrictive management constraints to the principal uses of the public lands necessary to achieve resource goals and objectives. A field office-wide No Leasing Alternative would be an unnecessarily restrictive alternative for mineral exploration and production on the public lands.

The National Environmental Policy Act (NEPA Section 102 (E)) requires that agencies "study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources." No issues or conflicts have been identified during this land use planning effort which requires the complete elimination of oil and gas leasing within the planning area for their resolution. BLM's Land Use Planning Handbook (BLM Manual Ref. 1-1693), Appendix C, item H, requires that land use plans identify areas as open or unavailable for leasing.

Given these potential categories of decisions, the alternatives analyzed in the Draft RMP/EIS included no leasing for certain areas, but a field office-wide no leasing alternative was not necessary in order to resolve issues and protect other resource values and uses.

As mentioned above, a "No Leasing Alternative" should not be confused with the "No Action Alternative" for purposes of NEPA compliance. Leasing and No Leasing on the public lands has previously been analyzed in several NEPA documents. In 1973 the Department of Interior published the Final Environmental Impact Statement on the Federal Upland Oil and Gas Leasing Program. The proposed action was to lease Federal lands for production of oil and natural gas resources. Alternatives included the No Action Alternative, which at initiation of the program was "No Leasing." To supplement that EIS, BLM prepared a series of high intensity Environmental Assessments (then titled "Environmental Analysis Records or EARs") including the Oil and Gas Leasing Program Kanab District Environmental Analysis Record (EAR), 1976 which addressed oil and gas leasing for the public lands in the Kanab Field Office area. Alternatives again included the No Action or "No Leasing" alternative. The outcome was a category system for leasing which categorized all public and Forest Service lands into four groups: 1) open to leasing with standard lease stipulations, 2) Special Stipulations to address

special concerns, 3) No surface occupancy and 4) No Leasing. Since completion of the EAR in 1976, oil and gas leasing in the Kanab Field Office Area has been an ongoing federal program under the established categories.

The CEQ (Section 1502.14[d] of NEPA) requires the alternatives analysis in an EIS to "include the alternative of no action." CEQ Forty Most Asked Questions, Question 3 goes on to say that:

“. . . Section 1502.14(d) requires the alternatives analysis in the EIS to "include the alternative of no action." There are two distinct interpretations of "no action" that must be considered, depending on the nature of the proposal being evaluated. The first situation might involve an action such as updating a land management plan where ongoing programs initiated under existing legislation and regulations will continue, even as new plans are developed. In these cases "no action" is "no change" from current management direction or level of management intensity. To construct an alternative that is based on no management at all would be a useless academic exercise. Therefore, the "no action" alternative may be thought of in terms of continuing with the present course of action until that action is changed. Consequently, projected impacts of alternative management schemes would be compared in the EIS to those impacts projected for the existing plan. In this case, alternatives would include management plans of both greater and lesser intensity, especially greater and lesser levels of resource development.

The second interpretation of "no action" is illustrated in instances involving federal decisions on proposals for projects. "No action" in such cases would mean the proposed activity would not take place, and the resulting environmental effects from taking no action would be compared with the effects of permitting the proposed activity or an alternative activity to go forward."

Therefore, for the Kanab Draft RMP/EIS, the No Action Alternative would continue the status quo which is to lease under the oil and gas categories established in the current land use plans.

## **C. RESULTS OF PROTEST PERIOD**

The BLM received 14 protest letters with standing during the 30-day protest period provided for the proposed land use plan decisions contained in the Kanab Proposed RMP/Final EIS in accordance with 43 CFR Part 1610.5-2. Of these, 12 presented valid protest issues. Protesting parties with valid protests included:

Eleven letters from organizations: Western Watersheds Project, Inc.; Land Use Volunteers of Kane County; Alton Coal Development LLC; Kaibab Band of Paiute Indians; Colorado Plateau Archaeological Alliance; ECOS Consulting; Utah Rivers Council; Garkane Energy; Kane County Commission; Private Land Owners Upper Valley; Southern Utah Wilderness Alliance (SUWA), Public Employees for Environmental Responsibility (PEER) - Southwest Chapter, The Wilderness Society (TWS), Center for Native Ecosystems, Wild Earth Guardians, Sierra Club - Utah Chapter.

One letter from an individual: Laura Welp

Protest issues were varied. Numerous protests centered on whether or not BLM followed the NEPA regulations in completing the land use planning effort. Issues specifically related to a lack of detailed impact analysis for numerous resources, lack of an adequate range of alternatives, and a lack of opportunities for public involvement. Other issues identified that the land use plan did not meet FLPMA's multiple use mandate or give priority to the designation of ACECs and protection of the relevance and importance values thereof. In addition, protests declared that BLM did not adequately analyze effects of planning actions on air quality or appropriately analyze impacts of climate change. Some protestors did not feel that their comments and/or submitted information provided on the Draft RMP/Draft EIS were satisfactorily responded to in the Proposed Plan/Final EIS.

Detailed information on protest response can be found on the BLM Washington Office Website at: [http://www.blm.gov/wo/st/en/prog/planning/protest\\_resolution.html](http://www.blm.gov/wo/st/en/prog/planning/protest_resolution.html)

The BLM Director addressed all protests without making significant changes to the Proposed RMP/Final EIS. Two of the protests were granted in part, and two changes were made to the decisions in the Approved Plan in response to the protests. These included changing the VRM objectives on 3,500 acres of lands from a VRM III to VRM II to protect scenic relevant and important values in a proposed ACEC, and deleting two parcels of land from the FLPMA Section 203 sale disposal list in Appendix 5 because they do not meet BLM's sale criteria. In addition, minor adjustments and clarifications were made and all changes are explained in the *Notice of Minor Modification and Clarification* section later in this ROD.

## **D. THE DECISION**

The decision is hereby made to approve the attached plan as the Approved Resource Management Plan (RMP) for management of public lands that are administered by the BLM's Kanab Field Office (see Approved RMP). The Approved RMP replaces public land decisions in the Escalante MFP (1981), Paria MFP (1981), Vermilion MFP (1981), Zion MFP (1981), Cedar-Beaver-Garfield-Antimony (CBGA) RMP (1986) and amendments.

The Approved RMP was prepared under the authorities of the Federal Land Policy and Management Act (FLPMA) of 1976 in accordance with BLM planning regulations (43 CFR Part 1600). An Environmental Impact Statement (EIS) was prepared for this RMP in compliance with the National Environmental Policy Act (NEPA) of 1969.

The Approved RMP is nearly identical to the Proposed RMP presented in the Proposed RMP/Final EIS, with minor modifications. Management decisions and guidance for public lands under the jurisdiction of the Kanab Field Office are presented in the Approved RMP. All decisions covered by the ROD are either land use planning decisions or implementation decisions and are effective upon signature of the ROD.

The Approved RMP emphasizes an appropriate multiple-use balance of protection and restoration of the natural and cultural resources while providing for resource use, extraction, and enjoyment. The Approved RMP is considered the appropriate plan of action when taking into

consideration the human (social and economic) environment as well as the natural environment. The Approved RMP supports the six broad policy goals for all Federal plans, programs, and policies:

1. Fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
2. Assure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings;
3. Attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences;
4. Preserve important historic, cultural, and natural aspects of our national heritage, and maintain, wherever possible, an environment which supports diversity and variety of individual choice;
5. Achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life's amenities; and
6. Enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

### **What the Decision/RMP Provides**

Land use plan decisions include goals, objectives, land use allocations and management actions.

**Goals:** are the broad statements of desired outcomes, and are usually not quantifiable.

**Objectives:** are specific desired conditions, usually quantifiable and measurable, and may have timeframes for achievement.

**Land use allocations:** specify locations within the planning area that are available or not for certain uses. These include decisions such as what lands are available for livestock grazing, mineral material use, oil and gas leasing, and locatable mineral development, what lands may be available for disposal via exchange and/ or sale, and what lands are open, closed, or limited to motorized travel (please note that all acreages presented in the Approved RMP are estimations even when presented to the nearest acre).

**Management actions:** include those provisions that help in meeting the established goals and objectives and include measures that will be applied to guide day-to-day activities on public lands, including but not limited to stipulations, guidelines, best management practices (BMPs), and design features.

The primary RMP management decisions in the Approved RMP are to:

- Designate the Cottonwood Canyon Area of Critical Environmental Concern (ACEC) and manage according to the special management prescriptions.
- Designate 51,570 acres as avoidance areas for rights-of-way; and 75,700 acres as exclusion areas for rights-of-way.

- Designate six river segments as suitable for consideration as part of the National Wild and Scenic system, and manage such segments to protect the free flowing nature and outstandingly remarkable values.
- Protect, preserve and maintain the wilderness characteristics on non-WSA lands for 27,770 acres in five areas.
- Conduct proactive cultural resource inventories under Section 110 of the National Historic Preservation Act.
- Designate areas as Limited, Closed, or Open to off-highway vehicle use:
  - Designate 528,000 acres as limited to off-highway vehicle use,
  - Designate 25,000 acres as closed to off-highway vehicle use, and
  - Designate 1,000 acres in two areas as open to cross country off-highway vehicle use.
- Determine which lands are available or unavailable to mineral leasing:
  - Make an estimated 475,000 acres of the 554,000 acres of federal mineral estate available for oil and gas leasing;
  - Make an estimated 95,400 acres available for oil and gas leasing under standard lease terms; an estimated 296,200 acres available subject to Controlled Surface Use or Timing Limitation stipulations; and an estimated 83,400 acres available subject to No Surface Occupancy (NSO) stipulations.
  - Make approximately 79,000 acres closed to oil and gas leasing,
- Recommend to withdraw approximately 9,500 acres from locatable mineral entry.
- Designate six Special Recreation Management Areas (SRMAs) and identify special recreational management zones.
- Manage the five Wilderness Study Areas as VRM Class I and either open (sand dune area of Moquith Mountain), closed or limited to designated routes for OHV use.
- Close the Water Canyon Allotment to livestock grazing (48 animal unit months [AUM]) for the life of the plan. Combine the Lydia's Canyon Allotment with the Lydia Allotment, and combine the Sawmill Allotment with the South Canyon Allotment.
- Designate the following VRM management classes:
  - VRM Class I: 76,000 acres
  - VRM Class II: 99,600 acres
  - VRM Class III: 205,500 acres
  - VRM Class IV: 172,900 acres

This ROD serves as the final decision establishing the land use plan decisions outlined in the Approved RMP and is effective on the date it is signed. No further administrative remedies are available for these land use plan decisions.

### **What the Decision/RMP Does Not Provide**

The Approved RMP does not contain decisions for the mineral estates of land administered by the BLM Kanab Field Office for Forest Service lands located in the planning area, for lands under the jurisdiction of other Federal agencies, or for private or State-owned lands and minerals. RMP decisions for the surface estate only apply to BLM managed lands, even where these private or state lands are shown on a map included in the RMP.

- The Approved RMP does not affect valid existing rights.
- The Approved RMP does not create new wilderness or wilderness study areas.
- Existing WSAs continue to be managed under the Interim Management Policy for Lands under Wilderness Review.
- Withdrawal recommendations are not effective until the Secretary of Interior or Congress takes action.
- “Closed routes” are not closed for administratively approved activities.
- The Approved RMP does not adjudicate, analyze, or otherwise determine the validity of claimed rights-of-way. However, the State of Utah’s statutory policy is to “use reasonable administrative and legal measures to protect and preserve valid existing rights-of way granted by Congress under R.S. 2477,” (Utah Code 63J-4-401(7)(b)). The BLM is committed to working with the State to employ potential options to recognize existing rights-of-way in accordance with Washington Office Instruction Memorandum 2008-175 and 2008-175. BLM recognizes that it would be beneficial to meet and discuss Non-Binding Determinations and Recordable Disclaimer of Interest options which would result in the BLM documenting its position in its official records, after public notification and involvement. BLM will work with the State and counties to set priorities for specific roads. It is BLM’s intent to work toward an outcome that is in the interest of the general public and the State of Utah.
- The Approved RMP does not affect terms of existing leases, commercial recreation permits, or other permits issued by the BLM.
- The designated Paria Wilderness would continue to be managed under the Wilderness Management Plan.

In addition, many decisions are not appropriate at this level of planning and are not included in the ROD. Examples of these types of decisions include:

**Statutory requirements:** The Approved RMP will not change the BLM's responsibility to comply with applicable laws, rules, and regulations.

**National policy:** The Approved RMP will not change BLM's obligation to conform to current or future national policy.

**Funding levels and budget allocations:** These are determined annually at the national level and are beyond the control of the field office.

### **Implementation Decisions**

While the designation of areas as Open, Closed, or Limited to off-highway vehicle use is a land use planning decision, the proposed route designations for motorized wheeled travel in the planning area included the Proposed RMP/Final EIS are implementation decisions.

The route designations described in the *Travel Management* section of the Approved RMP and identified on Map 10 are effective upon issuance of this Record of Decision. All area designations are complete upon signature of the ROD in accordance with 43 CFR Par 8342.2(b). Public notice was provided for both the area designation decisions and the route decision upon

publication of the Federal Register Notice of Availability of the Proposed RMMP/Final EIS on July 18, 2008.

### **Route Designation Process**

Designation of specific motorized vehicle routes for the Approved RMP was undertaken addressing each route's purpose and need and weighing the purpose and need against potential resource conflicts. Routes were not designated in the Approved RMP where BLM determined that the routes have no purpose and need (e.g., duplicative routes) or where resource conflicts outweighed the purpose and need. Several interdisciplinary team meetings were held, including representatives of Kane and Garfield Counties, to evaluate all the routes inventoried within the planning area. BLM inventoried 1,482 miles of routes as baseline and considered for designation. Each route was evaluated for its purpose and need and any resulting resource conflicts. A total of 76 miles of routes were determined to have either no valid purpose and need or resource conflicts that outweighed the purpose and need for the route. Consequently, these 76 miles of routes, were not designated for motorized travel. Wildlife sensitive habitat accounts for the majority of route mileage identified for non-designation. Other major resource conflicts derive from wilderness and riparian values, non-motorized recreation needs and at-risk cultural resources. The route evaluation process resulted in the designation of 1,402 miles of full sized vehicle routes in the Approve RMP. The public and BLM staff specialists did not submit or identify routes specifically for ATVs, motorcycles or mountain bikes; therefore, none were identified for those specialized uses in the Approved RMP.

**Wilderness Study Area (WSA) Ways Designated for Travel:** Inventoried ways within the five Wilderness Study Areas (53,910 acres) managed by the Kanab Field Office total 32.6 miles. Out of these 32.6 miles, 7.6 miles are not designated for motorized travel in the Approved RMP. The remaining 25.0 miles of inventoried ways, consisting of seven ways in two of the Wilderness Study Areas (WSAs), are designated in the Approved RMP because they were considered to serve other purposes and needs that could be accommodated while not impairing wilderness suitability. The most controversial ways are located in the Moquith Mountain and Parunuweap Canyon WSAs. (Note that travel within those two WSAs as well as the Orderville Canyon and North Fork Virgin River WSAs has been restricted for the past several years as a result of two Federal Register Restriction Notices (FRNs)). The FRNs essentially limited motorized travel to only those ways identified during the original wilderness inventory compiled by BLM in 1980. The Moquith Loop and Hell Dive inventoried ways in the Moquith Mountain WSA provide access to scenic overlooks and a cultural site to be managed for public use. In the Parunuweap Canyon WSA, ways accessing Rock Canyon, Poverty Flat, Steep Trail, Elephant Cove and two State sections are highly popular with many local residents and hunters who have traditionally enjoyed outings along those routes.

Although very popular with motorized users, these ways pose potential resource conflicts with cultural, wildlife, and vegetation resources. Both of these WSAs have experienced occasional off-way vehicle travel in the past which has resulted in impacts primarily to vegetation resources. However, the BLM has found that the resource impacts could be prevented by clearly signing WSA boundaries and the allowable ways.

BLM intends to further prevent impairment to wilderness resources through land use planning. Prior to the Approved RMP, cross-country travel by OHVs had been permitted on all BLM lands surrounding the WSAs managed by the Kanab Field Office. This freedom to ride cross-country near sensitive WSA resources often led to unintentional off-way travel as OHV operators enter the WSAs from the unrestricted lands surrounding them. Designation of lands surrounding the WSA as restricted to designated routes and enforcement of all travel designations throughout the decision area would provide BLM with a great deal more ability to control off-way travel in the WSAs. Upon signature of this ROD, OHV operators will be on notice of designated route restrictions prior to reaching the WSA boundaries and violations of these designations could lead to law enforcement activity.

Where ways would remain available for motorized use within WSAs, such use would continue on a conditional basis. Use of the existing ways would continue as long as the use of these routes does not impair wilderness suitability (IMP, BLM 1995). Through monitoring efforts, if use and/or non-compliance are found to impair the area's suitability for wilderness designation, BLM would take further action to limit use of the routes or close them to motorized travel. The continued use of these routes, therefore, is based on user compliance and non-impairment of wilderness values.

**WSA Ways Not Designated for Travel:** The Approved RMP did not designate all of the ways within WSAs. There are 7.6 miles of ways not designated in the Approved RMP which are disputed by groups and individuals favoring continued OHV access. One way in the Moquith Mountain WSA accesses a popular viewpoint on the Kaibab Paiute reservation just over the state line in Arizona. The BLM has not designated this way for motorized travel in order to resolve a conflict with tribal resource management goals and objectives. Other controversial ways in the Parunuweap Canyon WSA were not designated in the Approved RMP due to their duplicative nature or due to conflicts with and threatened impacts to riparian, cultural and wildlife resources. Monitoring of these WSAs over the past few years has revealed recurring off-route travel along those ways that would threaten impairment of wilderness values if allowed to continue. Repeated attempts to prevent off-route travel along those ways have largely proven time-consuming and ultimately unsuccessful.

**Designated Routes within Non-WSA Lands with Wilderness Characteristics:** In the Approved RMP, a total of 26.2 miles of routes are designated within areas specified as non-WSA lands with wilderness characteristics. These routes provide access to destinations which include scenic overlooks and slot canyon access points. These routes were found not to have a negative effect on the wilderness characteristics in the area because travel on them is very light and the topographical masking found in the area makes them largely unnoticeable.

**Modifications to Designated Routes:** BLM received many comments on the Draft RMP/EIS that suggested additions, deletions, and modifications to the proposed route system for the Preferred Alternative. The route designation process entailed the analysis of thousands of route segments covering 554,000 acres. The Approved RMP identifies that specific designated routes may be modified through subsequent implementation planning and project planning on a case-by-case basis and based on site-specific documentation with the National Environmental Policy Act (NEPA). Modifications to the route system in the Approved RMP will not be considered

until implementation of the travel portion of the plan has been substantially completed, which includes mapping, signing, monitoring, and evaluation. Routes throughout the decision area would be monitored according to regulations at 43 Code of Federal Regulations (CFR) 8341.2 requiring the BLM to monitor the effects of OHV use. In the future, BLM will use the criteria in Appendix 7 of the PRMP/FEIS to make adjustments (additions, deletions, or modifications) to the route network, based on site-specific monitoring and NEPA analysis.

## **E. NOTICE OF MODIFICATIONS AND CLARIFICATIONS**

Modifications and clarifications were made to the Approved Plan based on the review and resolution of the protest letters, as well as from internal review by the BLM. The modifications or clarifications to the decisions are provided below.

### **Modifications**

As a result of protests on the Proposed Plan and continued internal review, BLM made the following modifications to the Proposed Plan. As described below, these modifications are not considered significant changes. The Management Decisions section of the attached Approved Plan includes these modifications.

- In response to a protest concerning protecting the relevance and important values for potential ACECs that were not designated in the Proposed Plan, the BLM changed a VRM decision. Approximately 3,500 acres of the potential White Cliffs ACEC has a relevant and important value of scenery and was proposed to be managed as VRM III in the Proposed RMP without ACEC designation. In order to protect this relevant and important value, these 3,500 acres will be managed as VRM II in the Approved RMP, but will not be designated an ACEC.
- In response to a protest on two tracts of land available for FLPMA Section 203 sales in the Proposed RMP, the following lands were removed from the list in Appendix 5 of the Approved RMP because they do not meet the Section 203 sale criteria:
  - Township 35 South, Range 1 East, Section 33 SW $\frac{1}{4}$ SE $\frac{1}{4}$
  - Township 36 South, Range 1 East, Section 4, Lots 1, 2
- The following lands were removed from the list in Appendix 5 in the Approved RMP concerning lands available for FLPMA Section 203 sales because they have been conveyed through patent to the State of Utah by Congressional legislation, in Public Law 105-355:
  - T. 38 S., R. 2 W., Sec. 11, SW $\frac{1}{4}$ NW $\frac{1}{4}$ , W $\frac{1}{2}$ SW $\frac{1}{4}$
  - T. 38 S., R. 2 W., Sec. 14, W $\frac{1}{2}$ NW $\frac{1}{4}$ , and the portion of land north of Cottonwood Road in the NW $\frac{1}{4}$ SW $\frac{1}{4}$
  - T. 38 S., R. 2 W., Sec. 15, and the portion of land north of Cottonwood Road in the SE $\frac{1}{4}$ NE $\frac{1}{4}$ , SW $\frac{1}{4}$ NW $\frac{1}{4}$

- After further coordination with Zion National Park, two routes in the Orderville Canyon area totaling one mile will be closed in order to help limit unauthorized OHV access into the park.
- After further coordination with Zion National Park concerning the western portion of the Kanab Field Office along the boundary with the Park, 1,500 acres of land that were managed as VRM III in the Proposed RMP will be managed as VRM II in the Approved RMP. This minor modification was made to better manage visual intrusions in an area that has visual sensitivity near the Park.
- As a result of modifying the VRM decisions discussed above, the VRM acres in Management Decision of the Approved RMP have been changed from VRM II – 94,400 acres in the Proposed RMP to 99,600 acres in the Approved RMP; and VRM III – 210,700 in the Proposed RMP to 205,500 in the Approved RMP acres.
- As a result of further BLM internal review and coordination with the State of Utah, the following decisions regarding the Greater sage-grouse from the Proposed RMP were not included in the Approved RMP. Not including these decisions was analyzed in the Draft RMP/EIS (October 2007) under Alternative D and is not considered a significant change. These changes make the Kanab planning decision consistent with BLM conservation strategies and the UDWR Greater sage-grouse policy, as well as Greater sage-grouse BLM land use plan decisions state-wide:
  - a) The following decisions from page 2-15 of the Proposed RMP are not included in the Approved RMP under the Greater sage-grouse decisions:
    - Preclude cross-country OHV use in Greater sage-grouse nesting and brood-rearing habitats. (Note: This decision is already cross-tracked as part of the OHV decisions in the Approved RMP.)
    - Avoid new ROWs with high-profile structures (e.g., buildings, storage tanks, overhead powerlines, wind turbines, towers, and windmills) within 1 mile of an active Greater sage-grouse lek or in nesting and brood-rearing habitat. (Note: This decision was changed to ½ mile to be consistent on a state-wide basis.)
    - Avoid insecticide use in Greater sage-grouse nesting and early brood-rearing habitats during the early developmental stage (March 15 to July 15) of Greater sage-grouse chicks. (Note: This decision will be analyzed as part of activity-level planning on future actions.)
  - b) The following decisions from page 2-45 of the Proposed RMP are not included in the Approved RMP:
    - Avoid new ROWs (106,670 acres) in the following areas (Map 11):
      - ♦ Within 1 mile of an active Greater sage-grouse lek (avoid ROWs with high-profile structures [e.g., buildings, storage tanks, overhead powerlines,

- wind turbines, towers, and windmills]) (Note: This decision was changed to ½ mile to be consistent on a state-wide basis.)
- ♦ Within Greater sage-grouse nesting and brood-rearing habitat (avoid ROWs with high-profile structures [e.g., buildings, storage tanks, overhead powerlines, wind turbines, towers, and windmills]). (Note: This decision was deleted because it is not consistent with BLM or State Greater sage-grouse plans or policies.)
- As a result of modifying some of the Greater sage-grouse decisions in the Approved RMP, the total acreage of ROW avoidance has been changed to 51,570 acres in the Approved RMP LAR – 5 and the ROW Map 11 has been modified to reflect this change.

### **Clarifications**

The following clarifications and minor corrections made to the information included in the Proposed RMP/Final EIS are reflected in the attached Approved RMP:

- In response to a protest, the BLM noted that in Appendix 13 (pp. 18-19) of the Proposed RMP, the BLM incorrectly identified a Kane County claimed RS-2477 route as a factor to downgrade a Wild and Scenic River segment of the East Fork Virgin River (Segment 37-41). This should have been identified as a “way” that was open to motorized use. The presence of the way was the factor considered in classifying the segment as “scenic.” Whether the county claims the route under RS-2477 is not a determining factor, and the BLM erred by including the RS 2477 reference. This clarification has been made in Appendix 11 of the Approved RMP.
- As a result of BLM review and coordination with the State of Utah, the following decision on page 2-49 of the Proposed RMP regarding coal unsuitability was clarified in order to more closely reflect the coal regulations found in 43 CFR 3400, as follows in the Approved RMP:
  - **Areas Unsuitable for Surface Coal Mining:**
    - ♦ MIN-9: Approximately 35,538 acres (Map 15) are determined to be unsuitable for surface mining and surface operations incident to an underground mine as stated in 43 CFR 3400.0-5(mm) based on the 20 criteria identified in Appendix 6.

Additional changes to reflect this clarification in wording have been made to Appendix 6 (Kanab Field Office: Coal Unsuitability Report) of the ROD.

- After reviewing the areas listed as ROW avoidance areas in the Lands and Realty section on page 2-45 of the Proposed RMP, BLM noted that the following areas were omitted from the list and added to the list in the Approved RMP. These areas were included in the total acreage figure in the Proposed RMP.

- LAR – 5: Within ½ mile of active, suitable (currently inactive) Utah prairie dog habitats and within potential reintroduction sites.

The BLM clarified the language in the decision for Special Status Species, SSS-53, SSS-54, SSS-55, SSS-56 in the Approved RMP regarding the Greater sage-grouse for better understanding and command of the decisions being made.

- The following appendices have been added to the Approved RMP for ease of reference:
  - Appendix 16 - Utah Standards for Rangeland Health and Guidelines for Grazing Management
  - Appendix 17 - Hydraulic Considerations for Pipelines Crossing Stream Channels

## **F. MANAGEMENT CONSIDERATIONS IN SELECTING THE APPROVED RMP**

The BLM is tasked to provide multiple use management for public lands by Federal Land Policy and Management Act and numerous other laws and regulations that govern the management of public lands. Due to the diversity of community needs and stakeholders affected by management of BLM lands, there has been both support and opposition to certain components of the Proposed Plan. BLM's objective in choosing Alternative B as the Preferred Alternative, and later using it as the base for the Proposed Plan (with modifications selected from the range of alternatives) was to address these diverse needs and concerns in a fair manner and provide a practical and workable framework for public land management. The BLM is ultimately responsible for preparing a plan consistent with its legal mandates, which reflects its collective professional judgment, incorporating the best from competing viewpoints and ideas. The Approved RMP (the Proposed Plan as clarified and modified in consideration of public comments and internal review) provides a balance between those reasonable measures necessary to protect the existing resource values and the continued public need for use of the public lands within the planning area. Both local and national interests were taken into account in arriving at this balance. The practical application of decisions was considered in light of land ownership patterns and the degree of federal control over the resources in a given area.

Approval of a plan that provides a balance to meet both resource concerns and social and economic concerns in the planning area was a major factor in its selection. The Proposed Plan was selected because it proposed management that will improve and sustain properly functioning resource conditions while considering needs and demands for existing or potential resource commodities and values. In the end, resource use is managed by integrating ecological, economic, and social principles in a manner that safeguards the long term sustainability, diversity and productivity of the land.

### **All Surface Disturbing Activities**

Stipulations for oil and gas leasing and other surface disturbing activities are referred to throughout the Approved RMP and provide protection to resource values or land uses by establishing authority for delay, site changes, or the denial of operations. The stipulations apply, where appropriate and practical, to all surface-disturbing activities associated with land-use authorizations, permits, and leases issued on BLM lands. As a result, protections for resource values are applied in a consistent manner to all activities. The stipulations are subject to exceptions, modifications, and waivers that are a means of adapting the stipulations to meet changing circumstances. The stipulations in the Approved RMP, along with the exceptions, modifications, and waivers, are provided in Appendix 3.

### **Air Quality**

BLM does not have regulatory control over air quality issues, either on public lands or on Tribal or state lands. BLM relies on the agency with jurisdiction over air quality to set regulatory standards and criteria to protect the air quality in a particular area. Once these standards are established, BLM references them in its permitting documents and ensures that all permitted activities on public lands refer to the appropriate agency's standard. With this regulatory framework in place the Approved RMP, by necessity, does not make any air quality decisions. Instead, the Approved RMP references standards set by the State of Utah (Appendix10). Where the State of Utah standards are inapplicable (e.g. over Tribal lands), BLM will work with the Environmental Protection Agency (EPA) to ensure that the appropriate federal standards are included or referenced in permitting documents. Finally, the Approved RMP established goals and objectives for air quality that reflect the standards set by the State or the EPA.

The Approved RMP allows the KFO to ensure that authorizations granted to use public lands and the BLM's own management programs comply with and support applicable local, state, and federal laws, regulations, and implementation plans pertaining to air quality.

### **Soil Resources**

The Approved RMP will limit and mitigate surface disturbance activities such as mineral development and cross country travel. This is especially important in areas where sensitive or fragile soils exist that may be susceptible to accelerated erosion, soil loss, and reduced productivity as a result of these surface disturbing activities. Under the Approved RMP soil resources will also benefit from vegetation treatments. Although vegetation treatments are initially surface disturbing, over the long term vegetation treatments will improve soil stability and improve soil condition by improving the vegetation that helps bind it together.

### **Water Resources**

The Approved RMP will continue to protect and maintain water quality standards on BLM lands managed by the Kanab Field Office. The Approved RMP includes closing the Water Canyon grazing allotment which will improve water quality for the town of Fredonia, Arizona, which uses the canyon as their culinary water source. The Approved RMP will also limit impacts from oil and gas leases by making all riparian areas subject to major constraints (NSO) and by placing

a 330 foot buffer on each riparian area. Under the Approved RMP, BLM will continue to monitor and manage watersheds to meet or make progress toward water quality standards set by the State of Utah.

### **Vegetation**

Decisions regarding vegetation improve the vegetative communities over the life of the plan. Under the Approved RMP land treatments (Map 5) would be prioritized and implemented on a case-by-case basis to improve vegetation communities throughout the planning area. These treatments would be conducted in areas where the desired vegetation community has been invaded or has reached an undesirable monoculture. Although short term losses of vegetation would occur, over the long term these actions would help to remove undesirable species, increase species diversity and age class, improve vegetation composition and structure, and increase vegetation cover and ecological condition.

### **Special Status Species (Threatened, Endangered, and Sensitive)**

Informal Section 7 consultation, as directed by the Endangered Species Act, subsequent regulations, and BLM policy, was conducted with the U.S. Fish and Wildlife Service (USFWS) throughout the development of the RMP. The BLM submitted a Biological Assessment (BA) and requested initiation of formal consultation on July 21, 2008. The USFWS responded with a Biological Opinion (BO) on September 29, 2008 completing the formal section 7 consultation process (Appendix 13). The BO concurred with the determinations made in the BA regarding potential effects on listed threatened and endangered species located within the planning area. The BA and the BO contain committed conservation measures that have been incorporated into the ROD and will be a part of the implementation of the Approved RMP (see Appendix 13 and the enclosed CD). These are committed measures that will be included as part of the proposed action of any subsequent site specific activities authorized by the RMP. Should any changes be made in any of the conservation measures identified in the BA and BO, Section 7 consultation with USFWS will be re-initiated.

The BLM, in coordination with the USFWS, developed the majority of these committed conservation measures as part of a programmatic Section 7 consultation that was completed in 2007. Some modifications and additional measures were developed during the consultation process specific to the Kanab RMP. All site specific level actions potentially impacting listed species or their critical habitat will implement these measures. Incorporating these measures will ensure that the BLM is in compliance with the Endangered Species Act and will meet necessary management and recovery goals. If BLM determines that any deviations, modifications, or waiver of these conservation measures may be necessary on a given project, re-initiation of Section 7 consultation with USFWS will be necessary.

BLM notes that the Biological Opinion (Appendix 13 and enclosed CD) provides a number of recommended conservation measures that are beyond the scope of this Approved Plan, but may be considered in tiered consultation with this programmatic opinion when project-specific analysis is conducted in the future. These recommended conservation measures are optional measures additional to the committed mitigation contained in Appendix 9, that BLM will

consider at the appropriate time and as deemed necessary to manage and recover listed and candidate plant and animal species occurring within the planning area.

The Approved RMP also incorporates resource protection measures and recommended Best Management Practices to maintain, protect, and enhance habitats that will support a diversity of non-listed sensitive fish, wildlife, and plant species. The intent of these measures is to achieve and maintain suitable habitat for desired population levels and distribution within the area covered by the RMP. The BLM will continue to work cooperatively with UDWR (which has jurisdiction over sensitive wildlife species) to maintain and establish crucial habitat management strategies as reflected in the approved RMP. These species are managed as necessary to protect them and their habitat from loss in accordance with the Federal Land Policy and Management Act (FLPMA), BLM management guidelines, and policy contained in the BLM's 6840 Manual.

### **Fish and Wildlife**

The Approved RMP responds to issues regarding wildlife by providing restrictions to uses in crucial wildlife habitat areas. BLM uses the Utah Division of Wildlife Resources (UDWR) crucial habitat boundaries (Map 2 through 4) to apply these restrictions because UDWR is the entity with jurisdiction and expertise over wildlife in Utah. The crucial habitat identified in the Approved RMP for deer, elk, bighorn sheep and other big game species is the result of the State's combination of two previous UDWR categories of habitat – "critical" and "high value." The State uses the term "crucial" habitat as a trigger to initiate a close examination of proposed projects in order to determine the appropriate management response. BLM and the State recognize that some of the land within the defined area, depending on season and timing, may not support the respective species for various reasons. The BLM will coordinate with the State on issues related to crucial habitat to determine stipulations necessary to address impacts to the subject wildlife species. Following consultation, the BLM may grant an exception, modification, or waiver. BLM and the State will execute a protocol to implement this provision.

### **Cultural Resources**

Cultural resources are protected by several federal laws and regulations as well as BLM policies and procedures. Under the Approved RMP, the basic legal protections provided by these laws and regulations would be enforced and implemented. Under the Approved RMP, cultural resources would be provided with additional protections by the further regulation of OHV travel routes (eliminating cross country use on all but 1,000 acres) and the designation of an ACEC and management of SRMAs. The Cottonwood Canyon ACEC has cultural resources as one of its relevant and important values; these resources would benefit from the associated protections offered by ACEC designation. SRMA management would help focus recreation use and increase interpretation and public outreach to reduce impacts to cultural resources. The Approved RMP sets priorities for future Section 110 inventories to identify sites for management purposes. Three sites are allocated for public use that will provide opportunities for education and interpretation. The protections offered for cultural resources under the Approved RMP are beneficial to cultural resources.

Native American consultation was conducted during the RMP process through mailings to the Zuni, the Paiute Tribes of Utah (PITU), Navajo, and Ute tribes, and through face-to-face

meetings with the Kaibab Paiute and Hopi tribes. The Kaibab Paiute tribe participated in the planning process as a cooperating agency attending ID Team meetings and helping to develop the Draft RMP/EIS alternatives. Comments on the Draft RMP/EIS were received from the Kaibab Paiute and Hopi tribes. A meeting was held with the Kaibab Paiute tribe in April 2008 to discuss the Proposed RMP/FEIS.

BLM has completed the formal Section 106 consultation with the Utah State Historic Preservation Office (SHPO). The July 17, 2008, letter from the SHPO concurred with BLM's recommendation of No Adverse Effect from any actions proposed in the PRMP/FEIS. (See Appendix 12) The Approved Plan will reduce imminent threats to significant cultural resources from natural and human-caused deterioration or potential conflicts with other resources.

### **Visual Resources**

The Kanab Field Office is home to nationally recognized scenery in southern Utah. These settings attract thousands of visitors a year who come to the Kanab area to enjoy the landscape and scenery. Scenic attractions in the Kanab planning area include Paria Canyon, Parunuweap Canyon, Moquith Mountain, Coral Pink Sand Dunes, and the North and East Forks of the Virgin River corridors. The Approved RMP provides protection for 76,000 acres of VRM I and 99,600 acres of VRM II, where changes to the landscape must be low, thus safeguarding the visitation and tourism industry, which is a significant contributor to the Kanab economy. At the same time, VRM class III objectives (205,500 acres) and IV (172,900 acres) (Map 6) are applied as necessary to allow for exploration and the associated infrastructure to support mineral resource development in accordance with the Energy Policy and Conservation Act and to implement vegetation treatments in support of the Healthy Lands Initiative.

### **Non-WSA Lands with Wilderness Characteristics**

Impacts on uses as a result of discretionary focused management, such as the protection, preservation, and maintenance of non-WSA lands with wilderness characteristics, were disclosed in the Proposed RMP/Final EIS, and considered in conjunction with impacts to resource values. There are 27,770 acres within five areas (Upper Kanab Creek, Moquith Mountain, Orderville Canyon, Parunuweap Canyon, and East of Bryce) (Map 7) that are carried forward for protection of their wilderness characteristics. They are managed primarily with a no surface occupancy stipulation for oil and gas leasing and all other surface disturbing activities, and as an avoidance area for rights-of-way.

Upper Kanab Creek and Moquith Mountain are the largest stand-alone blocks of undeveloped land of all the inventoried areas for wilderness characteristics. The size of these two areas makes them more suitable for effectively protecting, preserving, and maintaining their wilderness characteristics. In addition, managing these areas for wilderness characteristics is compatible with other management actions in the Approved RMP. Moquith Mountain substantially overlaps a portion of the Kanab Community SRMA in the non-motorized RMZ (Recreation Management Zone), which is managed for primitive recreation opportunities. Orderville Canyon and Parunuweap Canyon are small areas that are contiguous to WSAs and can be effectively managed for wilderness values. East of Bryce is contiguous to lands inside Bryce Canyon National Park that are recommended for wilderness by the National Park Service, and managing

this area for wilderness values compliments management of the National Park. Thus, all five areas are managed for primitive recreation opportunities which coincide with managing these areas for wilderness characteristics.

There were many areas found to have wilderness characteristics (89,780 acres) during the inventory reviews and not selected for management of those characteristics in the Approved RMP. The reasons for this decision were varied and complex. In most cases it was because those lands were found to have other important resources or resource uses that would conflict with protection, preservation, or maintenance of the wilderness characteristics. For example, even though no oil and gas leases encumbered these lands, they have high potential for future development. In addition, rights of way development (like the West Wide Energy Corridor), vegetation treatment areas (Healthy Lands Initiative), future water development for livestock/wildlife, and anticipated increased OHV use demands, would make managing for wilderness characteristics inappropriate. In other cases, management under the Approved RMP will provide some protection of wilderness values. For example, the Vermilion Cliffs unit overlaps the Kanab Community SRMA, which has a no surface occupancy stipulation for oil and gas development.

The Approved RMP provided the best balance in allowing for uses to occur while providing for protection of resource values and public health and safety.

In future references, lands managed in the Approved RMP as non-WSA lands with wilderness characteristics will be referred to as BLM natural areas. This change does not represent a new designation or a new decision. Rather, BLM wants to recognize these discretionary decisions with a better, simpler reference. Wilderness Areas and Wilderness Study Areas are formal designations that are managed in a prescribed manner. To avoid confusing these official designations with discretionary agency decisions, BLM has chosen a new reference to distinguish between formal designations (e.g., Wilderness Areas) and a discretionary management category (BLM natural areas). According to the Approved RMP, BLM natural areas will be managed to protect, preserve, and maintain values of primitive recreation, the appearance of naturalness and solitude.

### **Livestock Grazing**

The Approved RMP responds to issues related to managing for healthy rangelands and riparian and upland vegetation while still providing for livestock grazing by making most of the planning area available for livestock grazing, as long as Standards for Rangeland Health continue to be met, and restricting grazing where it is incompatible with resource values. For example, the Water Canyon Allotment is closed to livestock grazing in the Approved RMP to protect the water system of Fredonia, Arizona.

According to BLM policy, decisions about season of use, stocking densities, forage allocation, and utilization are made using Utah Standards for Rangeland Health and Guidelines for Grazing Management during the grazing permit renewal process. These are implementation-level decisions based on monitoring and inventory of range conditions and evaluation of such data. Changes in specific livestock management practices are, therefore, minimal in the Approved

RMP. The decisions made in the Approved RMP are limited to whether an allotment is available or not available for grazing during the life of the Plan.

Overall, the Approved RMP provides the best balance in allowing grazing to occur while protecting important natural resources.

### **Recreation**

There are six SRMAs (Map 8) that are designated with nine Recreation Management Zones (RMZs) which are intensively managed under the Approved RMP. Although several of these would be partially or wholly contained in existing WSAs or designated wilderness, the current and potential recreational values warrant additional management direction typically provided by SRMAs. The combination of diverse settings and recreation experiences potentially provided by these areas needs to be addressed more specifically through activity plans that will be developed for each SRMA. By focusing recreation management on these areas, BLM will be able to provide enhanced recreation experiences and opportunities while protecting other resource values such as cultural, riparian, and wildlife. The Approved RMP provides additional guidance and criteria for issuance of Special Recreation Permits. These criteria will help reduce user conflicts, enhance recreation experiences, and protect other resource values.

### **Transportation**

The Approved RMP responds to the issue of OHV use by designating all BLM lands as open, closed, or limited. Out of about 554,000 acres within the planning area, 1,000 acres are open to cross-country travel, 25,000 acres are closed to motorized travel, and 528,000 acres are limited to designated routes (Map 9).

The Travel Management Plan in the Approved RMP provides a network of transportation routes that tie into roads administered by the counties, the National Park Service, the U.S. Forest Service, and State of Utah. The Approved Plan closes 25,000 acres (designated wilderness and wild and scenic river corridors) to motorized use to accommodate users who value non-motorized areas for hunting, hiking, solitude, etc. There are also many opportunities in the limited areas where routes have not been designated for motorized use for these types of recreational experiences. Natural and cultural resource protection is also accomplished by limiting motorized travel to the routes designated in the Approved RMP. BLM worked closely with the counties to identify the baseline routes. Specific designations were made as a result of interdisciplinary team reviews, identification of resource conflicts, needed access points, and duplication of routes. In compliance with BLM policy and guidelines, OHV area designations in the Approved RMP were developed to meet the needs and demands for motorized travel and recreation throughout the decision area while substantially reducing impacts from cross-country OHV use and taking into consideration other resources and uses.

The designation of 1,000 acres as open to OHV use refers to the open sand dunes within the Moquith Mountain WSA and adjacent to the Coral Pink Sand Dunes State Park. Under the IMP, travel across open sand dunes may be allowed since tracks typically disappear with the ever-shifting dunes. The challenge in managing the Moquith dunes is keeping vehicles out of

surrounding and intermingled vegetation. The BLM depends on a formal partnership with the State Park, as well as the presence of its own staff to monitor use and enforce OHV rules.

### **Lands and Realty**

The Approved RMP protects resources while allowing for community growth, expansion needs, and the development of rights-of-way using sound management practices. Land ownership was considered to enhance multiple use, access to public lands, acquisition of lands with valuable resources, and disposal of lands which are difficult or uneconomic to manage or that are no longer needed for a federal purpose. The Approved RMP provides rights-of-way exclusion and avoidance areas (Map 11) to protect sensitive wildlife habitats and other sensitive resources, while allowing areas for placement and development of new ROWs.

According to Section 102 (a) of FLPMA, all public lands will be retained in Federal ownership unless it is determined that disposal of a particular parcel will serve the national interest. Furthermore, Section 203 (a) of FLPMA provides for sale of public lands (Map 13) if one of the following criteria is met: (1) the tract is difficult and uneconomic to manage as part of the public lands and is not suitable for management by another Federal agency; (2) such tract was acquired for a specific purpose and the tract is no longer required for that or any other Federal purpose; or (3) disposal of such tract will serve important public objectives, including but not limited to, expansion of communities and economic development that cannot be achieved prudently or feasibly on land other than public land. The public lands in the Kanab Field Office that have been identified for consideration for disposal by sale in the Approved RMP meet one or more of these criteria.

A prerequisite for entering into the exchange of Federal for non-Federal lands is the BLM determination that such an exchange is in the public interest. To make this determination, general criteria have been developed in the Approved RMP for both disposal of Federal lands and acquisition of non-Federal lands. Every exchange proposal during the life of the Approved RMP will meet the criteria for disposal and acquisition. The value(s) of acquisition must outweigh the value(s) of disposal for the proposal to be in the public interest and an exchange to be considered.

### **Minerals and Energy**

The Approved RMP specifies restrictions for permitted activities to resolve concerns regarding the impacts of these uses. These conditions apply not only to oil and gas leasing, but also apply, where appropriate, to all other surface disturbing activities associated with land-use authorizations, permits, and leases, including other mineral resources.

The Approved RMP manages oil and gas leasing and other surface disturbing activities with the following stipulations: Closed – 79,000 acres; No Surface Occupancy – 83,400 acres; Timing Limitations/Controlled Surface Use Stipulations – 296,200 acres; open with standard stipulations 95,400 acres (Map 14). As specified in the Energy Policy and Conservation Act and BLM policy, the oil and gas leasing stipulations in the Approved RMP are the least restrictive necessary to protect sensitive resource values while allowing for development.

The majority (99 percent) of the lands closed to leasing are areas made unavailable by law or regulation. These include designated wilderness, WSAs, and public lands within city/town municipal boundaries. The remaining one percent of the lands closed to leasing is due to suitable wild and scenic river corridors. Closing these areas to leasing is consistent with BLM national policy.

The Approved RMP incorporates resource protection while allowing exploration and development of mineral and energy resources. Oil and gas leasing categories were developed to limit impacts to wildlife, recreation, non-WSA lands with wilderness characteristics, and other sensitive resources. The Approved RMP increases oil and gas leasing constraints by approximately 60 percent from the No Action (Alternative A of the Draft RMP/EIS). This increase mostly relates to timing restrictions for crucial big game habitat that would still allow access for exploration and development of oil and gas resources and are subject to a waiver, exception or modification when appropriate.

Lands unsuitable for surface coal mining (Map 15) were identified in a detailed analysis as required in 43 CFR 3461.5. Therefore, decisions for surface coal mining suitability did not vary between alternatives. The development potential for locatable mineral resources (e.g. gold silver, uranium, etc.) is considered low for the Field Office decision area. As a result, lands recommended for withdrawal from location (Map 12) did not change significantly from the No Action (Alternative A of the Draft RMP/EIS). Sand and gravel and other mineral material excavations will continue to be issued on a case-by-case permit authorization (Map 16). Therefore, the approved RMP provides the best balance between protection of resources and commodity use and development.

**Areas of Critical Environmental Concern**

Concerns about specific resource values are addressed throughout the Approved RMP, and eliminated the need to designate some areas as Areas of Critical Environmental Concern (ACECs) since the proposed management provides adequate protection. In many instances, WSAs overlay some of the potential ACECs and management under IMP more than adequately protected the relevance and importance values. If the WSAs are released from wilderness consideration, the Approved RMP states that all activities inconsistent with the goals and objectives of the Approved RMP would be deferred until a plan amendment is completed. Any plan amendment would have to provide protection to the relevant and important values identified.

Since standard management contained in the Approved RMP protects all of the relevant and important values in the planning area, only one area was designated as ACEC (Map 17) where additional special management is necessary. The following table (Table 2) provides a list of the potential ACECs that were not designated in the Approved RMP, their relevance and importance criteria, and planning decisions carried forward that protect those criteria.

**Table 2. Potential ACECs Not Designated in the Approved RMP**

Name of Potential ACEC not Designated in Approved RMP	Relevance & Importance Criteria	Management Protection Provided in Approved RMP
Welsh's Milkweed Potential	Scenic, geologic, or special	Manage 96 percent of the area

Name of Potential ACEC not Designated in Approved RMP	Relevance & Importance Criteria	Management Protection Provided in Approved RMP
<p>ACEC 1,300 acres</p>	<p>status species (Coral Pink Sand Dunes tiger beetle and Welsh's milkweed) values</p>	<p>under the IMP (Moquith Mountain WSA). Prohibit harvest of woodland products. Manage 50 acres of the Potential ACEC outside the WSA as VRM Class II Prohibit motorized use in and through vegetation in designated critical habitat for Welsh's milkweed. Implement conservation actions identified in the Conservation Agreement and Strategy for the Coral Pink Sand Dunes tiger beetle, including maintaining the established 370-acre conservation area.</p>
<p>Vermilion Cliffs Potential ACEC 23,400 acres</p>	<p>Scenic and cultural values, wildlife resources, and botanical and geologic systems or processes</p>	<p>Manage 56 percent of the potential ACEC as VRM Class II, 39 percent as VRM Class III. Manage 80 percent of the potential ACEC as open for oil and gas leasing subject to major constraints (NSO). Manage 20 percent of the potential ACEC as open for oil and gas leasing subject to moderate constraints (CSU for visual resources and seasonal wildlife stipulations). Prohibit disruptive activities within established buffers and seasons to protect raptor species. Cultural and historic properties are protected by law, policy and regulation Limit OHV use throughout the potential ACEC to 63 miles of designated routes that already exist, with use being closed seasonally on 2 miles to protect raptor species.</p>
<p>White Cliffs Potential ACEC 26,000 acres</p>	<p>Scenic and cultural values, wildlife resources, and botanical natural systems or processes</p>	<p>Manage 100 percent of the potential ACEC as VRM Class II . Manage 55 percent of the potential ACEC as open to</p>

Name of Potential ACEC not Designated in Approved RMP	Relevance & Importance Criteria	Management Protection Provided in Approved RMP
		<p>leasing subject to major constraints (NSO) or closed to leasing.</p> <p>Cultural and historic properties are protected by law, policy and regulation</p> <p>Manage 45 percent of the potential ACEC as open to leasing subject to moderate constraints (CSU for visual resources and seasonal wildlife stipulations)</p> <p>Limit OHV use to 35 miles of designated routes that already exist.</p> <p>Manage 55 percent of the potential ACEC for wilderness character (Upper Kanab Creek). Relevant and important values will be protected through NSO, right-of-way avoidance areas, and other restrictive management.</p>
<p>Parunuweap Canyon Potential ACEC 6,100 acres</p>	<p>Scenic and cultural values and wildlife resources</p>	<p>Manage 100 percent of the area under the IMP (Parunuweap Canyon WSA)</p> <p>Use environmental education, interpretation and signage to control unauthorized use.</p> <p>Cultural and historic properties are protected by law, policy and regulation.</p> <p>Issue Special Recreation Permits (SRPs) following evaluation of various factors including specific resources that could be impacted such as cultural values and wildlife resources.</p>

**Wild and Scenic Rivers**

There are six eligible river segments (30 miles) carried forward as suitable for inclusion into the National Wild and Scenic River system in the Approved RMP (Map 18) to protect the free-flowing nature and outstandingly remarkable values (ORVs) associated with the river segments. The segments recommended as suitable (East Fork Virgin River – two segments, North Fork Virgin River, Orderville Canyon, Meadow Creek/Mineral Gulch and Paria River) all conform to

corresponding recommendations from Zion National Park and BLM's Arizona Strip Field Office.

All river segments found suitable in the Approved RMP are those in which recreation and scenery were key ORVs. The unique nature of the recreation ORV centers around regionally, nationally, and internationally significant hiking and backpacking opportunities involving exceptionally scenic, deep canyon settings. The Paria River canyon, especially, is renowned as one of the top slot canyon destinations worldwide. The imposition of dams or other man-made structures or facilities along these segments would eliminate these important recreation opportunities and several commercial guiding and canyoneering enterprises which depend upon them.

In the Approved RMP, all segments are classified as "wild" except for one segment (East Fork Virgin River - segment 37-40a) classified as "scenic" due to vehicle ways within the river corridor.

Eligible river segments that were not carried forward as suitable in the Approved RMP are protected by various other management decisions. Many of these river segments include scenery, cultural and recreation as Outstandingly Remarkable Values (ORVs). These ORVs are more amenable for management by other means such as WSAs, non-WSA lands with wilderness characteristics, ACECs and SRMAs. The Cottonwood Complex (Cottonwood Creek, Indian Canyon, South Fork Indian Canyon, North Branch South Fork Indian Canyon, Water Canyon and Hell Dive Canyon) are within the Moquith Mountain SRMA and partially within the Moquith Mountain WSA and/or the Cottonwood Canyon ACEC, and are closed to surface disturbing activities. The segment of Deep Creek that is on public land is physically isolated and has a lack of legal public access that provides protection to this area. The BLM is working cooperatively with the UDWR to manage Three Mile Creek as habitat for the Bonneville cutthroat trout. The free-flowing nature of this stream is not at risk, and the identified ORV on public lands would be effectively managed under the Approved RMP.

Therefore, the ORVs along these eligible segments are protected by other management actions in the Approved RMP.

In addition, BLM looks forward to working with the State of Utah, local and tribal governments, and other federal agencies during the next phase of the Wild and Scenic River process. BLM will work cooperatively with the above entities in a statewide study to reach consensus regarding recommendations to Congress for the inclusion of rivers into the NWSR system. BLM will also continue to work with affected local, state, federal, and tribal partners to identify in-stream flows necessary to meet critical resource needs, including values related to the subject segments, so that they may be identified for inclusion into future recommendations to Congress.

## **G. CONSISTENCY AND CONSULTATION REVIEW**

Consistency of the Approved RMP with other local, State, Tribal and federal plans and policies (which sometimes conflict amongst themselves) was also considered as a factor in selection of the Approved RMP. The Approved RMP is consistent with plans and policies of the Department of the Interior and Bureau of Land Management, other federal agencies, state government, and

local governments to the extent that the guidance and local plans are also consistent with the purposes, policies, and programs of federal law and regulation applicable to public lands. Chapter 5 of the Proposed RMP/Final EIS provides a full discussion of consistency with all involved entities.

### **Governor's Consistency**

The Governor's Office did not identify any inconsistencies concerning state or local plans, policies, and programs following the 60-day Governor's Consistency Review of the Proposed RMP/Final EIS (initiated July 18, 2008, in accordance with planning regulations at 43 CFR Part 1610.3- 2(e), and concluded on September 16, 2008).

### **NHPA Section 106 Consultation**

A letter was received from the Utah SHPO on July 17, 2008, after reviewing BLM's decisions in the Proposed RMP/Final EIS. In the letter, the SHPO concluded that the decisions in the Proposed RMP will have no adverse affects on historic properties. Because there has been no appreciable change between the Proposed RMP and the Approved RMP, no further SHPO consultation is required and all decisions in the Approved RMP will have no adverse affects on historic properties. The letter of concurrence from the SHPO is found in Appendix 12.

### **Native American Consultation**

Consultations with Native Americans on the RMP have been ongoing since 2003. A thorough discussion of Native American Consultation in included under "Cultural Resources" in Section F of this ROD.

In addition, the Kaibab Paiute Tribe has participated in the Kanab RMP as a Cooperating Agency. The Tribe filed protest on the Proposed RMP/Final EIS concerning OHV route designation and the potential coal development in the Alton area. The protest was denied by the BLM Director because it did not present any protest issues that resulted in a change to the Approved RMP.

### **Section 7 Consultation under the Endangered Species Act**

Informal Section 7 consultation, as directed by the Endangered Species Act (ESA), subsequent regulations, and BLM policy, was conducted with the U.S. Fish and Wildlife Service (USFWS) throughout the development of the RMP. Formal consultation with the USFWS was initiated on July 21, 2008. As required by Section 7(a) of the ESA, the Kanab Field Office prepared a Biological Assessment (BA) to evaluate the listed species in its planning area. The BA analyzed the potential impacts on threatened and endangered species which could result from implementing management actions authorized under the proposed land use plan for the Field Office. The Kanab Field Office determined that some of the proposed actions "may affect, and are likely to adversely affect" the listed species and "may affect" designated critical habitat. The U.S. Fish and Wildlife Service prepared a Biological Opinion (BO), in which they concurred with BLM's determination on September 29, 2008, and is included in Appendix 13, and enclosed

CD. The USFWS further determined that implementation of the RMP, including committed mitigation measures, would not jeopardize the existence of any of the listed species.

## H. MITIGATION MEASURES

Measures to avoid or minimize environmental harm were built into the Approved RMP where practicable. Many of the standard management provisions will minimize impacts when applied to activities proposed in the planning area. The *Utah Standards and Guidelines for Rangeland Health* (see Appendix 16) will be used as the base standards to assess the health of BLM lands in the planning area. Best management practices (BMPs) will be used (when applicable) for a number of uses including livestock grazing, forest activities, mining, oil and gas development, and other surface disturbing activities (see Appendix 1). Additional measures to mitigate environmental impacts may also be developed during subsequent NEPA analysis at the activity level planning and project stages. Throughout the decisions in the Approved RMP, mitigation was used as a means to avoid and minimize environmental harm.

## I. PLAN MONITORING AND EVALUATION

Monitoring is the repeated measurement of activities and conditions over time. Evaluation is a process in which the plan and monitoring data are reviewed to see if management goals and objectives are being met and if management direction is sound. Monitoring data gathered over time is examined and used to draw conclusions on whether management actions are meeting stated objectives, and if not, why. Conclusions are then used to make recommendations on whether to continue current management or what changes need to be made in management practices to meet objectives.

The two types of monitoring that are tied to the planning process include implementation and effectiveness monitoring. Land use plan monitoring is the process of (1) tracking the implementation of land use planning decisions and (2) collecting and assessing data/information necessary to evaluate the effectiveness of land use planning decisions. The two types of monitoring are described below.

**Implementation Monitoring:** Implementation monitoring is the most basic type of monitoring and simply determines whether planned activities have been implemented in the manner prescribed by the plan. Some agencies call this compliance monitoring. This monitoring documents BLM's progress toward full implementation of the land use plan decision. There are no specific thresholds or indicators required for this type of monitoring.

**Effectiveness Monitoring:** Effectiveness monitoring is aimed at determining if the implementation of activities has achieved the desired goals and objectives. Effectiveness monitoring asks the question: Was the specified activity successful in achieving the objective? This requires knowledge of the objectives established in the RMP as well as indicators that can be measured. Indicators are established by technical specialists in order to address specific questions, and thus avoid collection of unnecessary data. Success is measured against the benchmark of achieving desired future conditions established by the plan.

Regulations at 43 CFR 1610.4-9 require that the proposed plan establish intervals and standards, as appropriate, for monitoring and evaluation of the plan, based on the sensitivity of the resource decisions involved. Progress in meeting the plan objectives and adherence to the management framework established by the plan is reviewed periodically. CEQ regulations implementing NEPA state that agencies may provide for monitoring to assure that their decisions are carried out and should do so in important cases (40 CFR 1505.2(c)). To meet these requirements, the BLM will review the plan on a regular schedule in order to provide consistent tracking of accomplishments and provide information that can be used to develop annual budget requests to continue implementation.

Land use plan evaluations will be used by BLM to determine if the decisions in the RMP, supported by the accompanying NEPA analysis, are still valid. Evaluation of the RMP will generally be conducted every five years per BLM policy, unless unexpected actions, new information, or significant changes in other plans, legislation, or litigation triggers an evaluation. Land use plan evaluations determine if decisions are being implemented, whether mitigation measures are satisfactory, whether there are significant changes in the related plans of other entities, whether there is new data of significance to the plan, and if decisions should be changed through amendment or revision. Evaluations will follow the protocols established by the BLM Land Use Planning Handbook H-1601-1 in effect at the time the evaluation is initiated. Specific monitoring and evaluation needs are identified by resource/uses throughout the Approved RMP.

See monitoring plan in Appendix 15.

## **J. PUBLIC INVOLVEMENT**

One of BLM's primary objectives during development of the Kanab Field Office RMP was to understand the views of various publics by providing opportunities for meaningful participation in the resource management planning process. In-depth information on these efforts is included in the Scoping Report, the Kanab Field Office Draft RMP/EIS, and the Proposed RMP/Final EIS in Chapter 5, Consultation and Coordination. Below is a summary of these public involvement efforts.

The planning process formally began with the publication of the NOI in the Federal Register on April 2, 2004, which announced the BLM's intent to revise its LUPs. The formal public scoping period ended on February 15, 2005. Public scoping meetings were held in four locations with 167 participants. In addition, 997 written public scoping comments were received during this period. Further opportunities for public participation were provided in April 2005 during a data call for information (e.g., route data, resource inventories, and/or condition) and nominations for areas of critical environmental concern (ACEC) and WSRs. In January 2006, the public was invited to provide further input in the planning process by commenting on the preliminary ACEC and WSR reports.

Six bulletins/postcards were developed to keep the public informed of the Kanab RMP planning process. Planning bulletins and postcards provided planning updates to individuals, organizations, government agencies, and tribes on the mailing list. In addition, the project website provides the public with the opportunity to send requests to be added to the project mailing list to receive periodic bulletins and announcements.

On October 2, 2007, the BLM filed the KFO Draft RMP/EIS with the EPA. On October 12, 2007, the BLM and EPA published a Notice of Availability in the *Federal Register*, which marked the beginning of the formal 90-day public review comment period. The formal 90-day public comment period ended on January 10, 2008. During the 90-day public comment period, the BLM held five public meetings with 209 participants. The BLM received 8,571 public comments during the formal 90-day public comment period on the Draft RMP/EIS. In-depth information on these efforts is included in both the Kanab Draft RMP/EIS and the Kanab Proposed RMP/Final EIS in Chapter 5, *Consultation and Coordination*.

On July 18, 2008, the BLM and the Environmental Protection Agency published a Notice of Availability in the *Federal Register* which announced the publication of the Proposed RMP/Final EIS. The public was informed of the availability of the Proposed RMP/FEIS via news releases, the planning website and the RMP mailing list. The Proposed RMP/FEIS as well as all the background documents were available on the Kanab RMP planning website. A 30 day protest period commenced on July 18, 2008 and ended on August 18, 2008. In addition, a 60-day Governor's Consistency Review period ran concurrently with the protest period.

The BLM will continue to actively seek the views of the public, using techniques such as news releases and web-site information to seek participation and inform the public of new and ongoing project proposals, site-specific planning, and opportunities and timeframes for comment. The BLM will also continue to coordinate, both formally and informally, with the numerous state, federal, tribal and local agencies and officials interested and involved in the management of public lands in Kane and Garfield Counties within the planning area.

## **K. AVAILABILITY OF THE PLAN**

Copies of the Record of Decision and the Kanab Approved Resource Management Plan are available by request from the following locations:

BLM Kanab Field Office  
318 North 100 East  
Kanab, Utah 84741

By contacting the Kanab Field Office at:

(435) 644-4600

Or on the Kanab Field Office website at:

<http://www.blm.gov/ut/st/en/fo/kanab/planning.html>

**APPROVAL**

In consideration of the foregoing, I approve the Record of Decision for the Kanab Field Office Resource Management Plan.

A handwritten signature in black ink, appearing to read "C. Stephen Allred", written over a horizontal line.

C. Stephen Allred  
Assistant Secretary – Land and Minerals Management  
Department of the Interior

OCT 31 2008

Date

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## **APPROVED RESOURCE MANAGEMENT PLAN**

### **A. INTRODUCTION**

The Kanab Field Office Approved Plan replaces public land decisions in the Escalante MFP (1981), Paria MFP (1981), Vermilion MFP (1981), Zion MFP (1981), Cedar-Beaver-Garfield-Antimony (CBGA) RMP (1986) and amendments. The Approved Plan is now the base land use plan for public lands administered by the BLM Kanab Field Office. The Approved Plan adopts the management described in Proposed Plan and the Management Common to All Alternatives section presented in the Kanab Field Office Proposed RMP/Final EIS (BLM 2008), with adjustments as described in the Notice of Modification and Clarification sections of the ROD.

### **B. CONSIDERATION OF OTHER BLM PLANS AND POLICIES**

FLPMA Title II, Section 202, provides guidance for the BLM's planning process to coordinate planning efforts with American Indian tribes, other federal agencies, and state and local governments. To accomplish this directive, the BLM has kept abreast of other federal, state, local plans, and tribal government plans; considered such plans in the development of the alternatives for the Draft RMP/EIS; and worked with these other entities to avoid inconsistencies among their various plans. FLPMA and the planning regulations require that BLM plans be consistent with other officially approved or adopted resource related plans of other federal, state, and local governments to the extent those plans are consistent with federal law and regulations applicable to the public lands. In keeping with the above mandates, the Kanab Field Office asked federal, state, and local agencies and tribal councils to review the Draft RMP/EIS and inform the BLM of any inconsistencies, and members of the planning team reviewed the following federal, state, and local plans, Acts, and policies:

- Kane County, Utah, General Plan (1998 and amended 2007)
- Garfield County, Utah, General Plan (1995 and amended 1998 and 2007)
- Scenic Byway 12 Corridor Management Plan (2001)
- State Comprehensive Outdoor Recreation Plan (2003)
- Utah Comprehensive Wildlife Conservation Strategy (2005)
- Coral Pink Sand Dunes State Park General Management Plan (2004)
- Utah's Water Resources: Planning for the Future, Utah Division of Water Resources (2001)
- Utah State Law 63j-4-401
- Zion National Park General Management Plan (2001)
- Bryce Canyon National Park Fire Management Plan and Environmental Assessment/Assessment of Effects (2004)
- Arizona Strip District Proposed Plan/Final EIS (2007)
- St. George Field Office Resource Management Plan (1999)
- Grand Staircase–Escalante National Monument Management Plan (1999)
- Arizona Statewide Wild and Scenic Rivers Legislative EIS (1994)
- Southern Utah Support Area Fire Management Plan (2005)

- Endangered Species Recovery Plans and Conservation Agreements, including:
  - Mexican Spotted Owl Recovery Plan, 1995
  - Utah Prairie Dog Recovery Plan, 1991
  - Utah Prairie Dog Interim Conservation Strategy, 1997
  - Welsh’s Milkweed Recovery Plan, 1992
  - Siler Pincushion Cactus Recovery Plan, 1986
  - Conservation Agreement and Strategy for the Coral Pink Sand Dunes Tiger Beetle, March 31, 1997
  - Recovery Plan for the California Condor, 1996
  - Final Recovery Plan for the Southwestern Willow Flycatcher, 2002.
- Vegetation Treatments on BLM Lands in 17 Western States Programmatic Environmental Report, 2007
- Vegetation Treatments Using Herbicides in 17 Western States Programmatic Environmental Impact Statement, 2007
- Final Environmental Impact Statement Vegetation Treatment on BLM Lands in 13 Western States and Associated Records of Decision, 1991
- Energy Policy and Conservation Act (EPCA)
- Energy Policy Act of 2005
- Western Energy Corridor Programmatic EIS
- Memorandum of Understanding Between U.S. Department Of The Interior, BLM and U.S Department of Agriculture, Forest Service

In the event there are inconsistencies or discrepancies between previously approved plans and this Approved Plan, the decisions contained in the Approved Plan will be followed. The Kanab Field Office will continue to tier to statewide, national, and programmatic EISs and other NEPA and planning documents, as well as consider and apply Best Management Practices or other management protocols contained in other planning documents after appropriate site-specific analysis.

All future resource authorizations and actions will conform to, or be consistent with the decisions contained in this Approved Plan. All existing operations and activities authorized under permits, contracts, cooperative agreements or other authorizations will be modified, as necessary, to conform with this plan within a reasonable timeframe. However, this plan does not repeal valid existing rights on public lands. A valid existing right is a claim or authorization that takes precedence over the decisions developed in this plan. If such authorizations come up for review and can be modified, they will also be brought into conformance with the plan.

While the Final EIS for the Kanab Field Office RMP constitutes compliance with NEPA for the broad-scale decisions made in this Approved Plan, BLM will continue to prepare Environmental Assessments (EAs) and Environmental Impacts Statements (EISs) where appropriate as part of implementation level planning and decision-making.

## C. PLAN IMPLEMENTATION

Plan implementation is a continuous and active process. Decisions presented in the Management Decisions section of this Approved Plan are of three types: Immediate, One-Time, and Long-Term.

***Immediate Decisions:*** These decisions go into effect upon signature of the Record of Decision and Approved Plan. These include decisions such as the allocation of lands as available or unavailable for oil and gas leasing, ACEC designations, and OHV designations. Immediate decisions require no additional analysis and provide the framework for any subsequent activities proposed in the planning area. Proposals for actions such as oil and gas leasing, land adjustments, and other allocation-based actions will be reviewed against these decisions/allocations to determine if the proposal is in conformance with the plan.

***One-Time Decisions:*** These types of decisions include those that are implemented after additional site-specific analysis is completed. Examples are implementation of the recommendations to withdraw lands from locatable mineral entry or development of a habitat management plan or a special recreation management area plan. One-time decisions usually require additional analysis and are prioritized as part of the BLM budget process. Priorities for implementation of "one-time" RMP decisions will be based on several criteria, including:

- Current and projected resource needs and demands;
- National and Statewide BLM management direction and program emphasis; and Funding.

***Long-Term Guidance/Life of Plan Direction:*** These decisions include the goals, objectives, and management actions established by the plan that are applied during site-specific analyses and activity planning. This guidance is applied whether the action is initiated by the BLM or by a non-BLM project proponent. Long-term guidance and plan direction is incorporated into BLM management as implementation level planning and project analysis occurs (for example, as a result of the watershed assessment process or receipt of a land use application).

### **General Implementation Schedule of "One-Time" Actions**

Decisions in this plan will be implemented over a period of years depending on budget and staff availability. After issuing the ROD/Approved Plan, BLM will prepare an Implementation Plan that establishes tentative timeframes for completion of "one-time" actions identified in the Approved Plan. Most of these actions require additional analysis and site specific activity planning. This schedule does not include the decisions which are effective immediately upon approval of the plan (usually allocations), or the actions which describe the ongoing management that will be incorporated and applied as site-specific proposals are analyzed on an ongoing basis. This schedule will assist BLM managers and staff in preparing budget requests and in scheduling work. However, the proposed schedule must be considered tentative and will be affected by future funding, changing program priorities, non-discretionary workloads, and cooperation by partners and external publics. Periodic review of the plan will provide consistent tracking of

accomplishments and provide information that can be used to develop annual budget requests to continue implementation.

### **Maintaining the Plan**

Land use plan decisions and supporting information can be maintained to reflect minor changes in data, but maintenance is limited to refining, documenting, and/or clarifying previously approved decisions. Some examples of maintenance actions include:

- Correcting minor data, typographical, mapping, or tabular data errors
- Refining baseline information as a result of new inventory data (e.g., changing the boundary of an archaeological district, refining the known habitat of special status species or big game crucial winter ranges, or adjusting the boundary of a fire management unit based on updated fire regime condition class inventory, fire occurrence, monitoring data, and/or demographic changes)
- Applying an existing oil and gas lease stipulation to a new area prior to the lease sale based on new inventory data (e.g., apply an existing protective stipulation for sage-grouse to a newly discovered sage-grouse lek.)

The BLM expects that new information gathered from field inventories and assessments, research, other agency studies, and other sources will update baseline data and/or support new management techniques, best management practices, and scientific principles. Adaptive management strategies may be used when monitoring data is available as long as the goals and objectives of the plan are met (see the Adaptive Management section). Where monitoring shows land use plan actions or best management practices are not effective, modifications or adjustments may occur without amendment or revision of the plan as long as assumptions and impacts disclosed in the analysis remain valid and broad-scale goals and objectives are not changed.

Plan maintenance will be documented in supporting records. Plan maintenance does not require formal public involvement, interagency coordination, or the NEPA analysis required for making new land use plan decisions.

### **Changing the Plan**

The Approved Plan may be changed, should conditions warrant, through a plan amendment or plan revision process. A plan amendment may become necessary if major changes are needed or to consider a proposal or action that is not in conformance with the plan. The results of monitoring, evaluation of new data, or policy changes and changing public needs might also provide the impetus for an amendment. Generally, an amendment is issue-specific. If several areas of the plan become outdated or otherwise obsolete, a plan revision may become necessary. Plan amendments and revisions are accomplished with public input and the appropriate level of environmental analysis.

## D. PLAN EVALUATION

Evaluation is a process in which the plan and monitoring data are reviewed to see if management goals and objectives are being met and if management direction is sound. Land use plan evaluations determine if decisions are being implemented, whether mitigation measures are satisfactory, whether there are significant changes in the related plans of other entities, whether there is new data of significance to the plan, and if decisions should be changed through amendment or revision. Monitoring data gathered over time is examined and used to draw conclusions on whether management actions are meeting stated objectives, and if not, why. Conclusions are then used to make recommendations on whether to continue current management or to identify what changes need to be made in management practices to meet objectives.

BLM will use land use plan evaluations to determine if the decisions in the RMP, supported by the accompanying NEPA analysis, are still valid in light of new information and monitoring data. Evaluation of the RMP will generally be conducted every five years, unless unexpected actions, new information, or significant changes in other plans, legislation, or litigation triggers an evaluation. The following estimated evaluation schedule will be followed for the Kanab Field Office RMP:

- September 2013
- September 2018
- September 2023
- September 2028

Evaluations will follow the protocols established by the BLM Land Use Planning Handbook (H-1601-1) or other appropriate guidance in effect at the time the evaluation is initiated.

## F. MANAGEMENT DECISIONS

This section of the Approved Plan presents the goals and objectives, land use allocations, and management actions established for public lands managed by the Kanab Field Office. These management decisions are presented by program area. Not all types of decisions were identified for each program. A Monitoring section is also included for each program to describe how the program decisions will be tracked to ensure implementation (see Appendix 15).

Data used in development of the Approved Plan are dynamic. The data and maps used throughout the Approved Plan are for land use planning purposes and will be refined as site-specific planning and on-the-ground implementation occurs. Updating data is considered plan maintenance which will occur over time as the RMP is implemented (see the section on Plan Implementation).

**Note:** All acreages presented in the Approved RMP are estimations, even when presented to the nearest acre.

This section is organized as presented in the Kanab Proposed RMP/Final EIS. For ease of identification into the future, each program area has an identified abbreviation (see below) and each decision in that program is numbered in coordination with the abbreviation:

- Air Quality – **AQ**
- Soil Resources – **SOL**
- Water Resources – **WAT**
- Vegetation – **VEG**
- Special Status Species (Threatened, Endangered, and Sensitive) – **SSS**
- Fish and Wildlife – **WL**
- Wildland Fire Ecology – **FIRE**
- Cultural Resources – **CUL**
- Paleontological Resources – **PAL**
- Visual Resources – **VRM**
- Non-WSA Lands with Wilderness Characteristics – **WC**
- Drought and Natural Disasters – **DND**
- Forestry and Woodland Products – **FOR**
- Livestock Grazing – **GRA**
- Recreation – **REC**
- Transportation
  - Travel Management – Area Categories – **TRC**
  - Travel Management – **OHV**
  - Route Identification – **TRR**
  - Travel Management – **TRV**
- Lands and Realty – **LAR**
- Minerals and Energy – **MIN**
- Areas of Critical Environmental Concern – **ACEC**
- Wild and Scenic Rivers – **WSR**
- Wilderness (designated) – **DW**
- Wilderness Study Areas – **WSA**
- Other Designations – **OD**
- Public Safety – **HAZ**

This section lists the RMP goals developed by the BLM with input from cooperating agencies and the public. This section also identifies the objectives and describes management decisions applicable to the decision area.

### **RMP Goals**

- Manage public lands for multiple uses of public resources within the framework of applicable laws, regulations, and agency policies.
- Use adaptive management to meet resource objectives.
- Apply rangeland standards and guidelines to the decision area.
- Implement ecosystem management in an open, cooperative, responsive atmosphere to involve agencies, groups, and individuals in monitoring and addressing resource issues on public lands—issues that often span administrative and ownership boundaries.

- Maintain, improve, and restore (where needed) healthy ecosystems and habitat to support viable populations of fish, plants, and wildlife species while reducing habitat loss and fragmentation.
- Protect and enhance cultural and natural resources and values using the diversity of tools available to the BLM.
- Provide a variety of recreational, educational, and interpretive opportunities for people to experience public land resources and values.
- Reduce conflicts between uses and user groups.
- Recognize the unique cultural, historical, and social values of the decision area in developing a plan that manages the land and protects the heritage it engenders.

## **Air Quality (AQ)**

### **Goals and Objectives:**

Maintain air quality in accordance with standards prescribed by federal and state laws and regulations.

### **Management Actions:**

#### **AQ-1**

Manage air quality in accordance with the air quality standards prescribed by federal, state, and local laws, regulations, and policies including the following:

- Applicable National Ambient Air Quality Standards
- Applicable National Emission Standards for Hazardous Air Pollutants
- State or tribal implementation plans
- Prevention of Significant Deterioration (PSD), if applicable
- Conformity analyses and determinations
- Regional haze regulations, including visibility impacts on mandatory federal Class I areas
- Utah Smoke Management Plan.

#### **AQ-2**

Comply with the Clean Air Act through the application of the National Environmental Policy Act (NEPA) process on a case-by-case basis.

#### **AQ-3**

Comply with Utah Administrative Code Regulation R307-205, which prohibits the use, maintenance, or construction of roadways in disturbed areas without taking appropriate dust abatement measures. Compliance would be obtained through site-specific stipulations identified on a case-by-case basis for new projects and through the use of dust abatement control techniques in problem areas.

#### **AQ-4**

Mitigate actions that compromise ambient air quality standards or visibility within the Class I air areas.

#### **AQ-5**

BLM will continue to work cooperatively with state, federal, and tribal entities in developing air quality assessment protocols to address cumulative impacts and regional air quality issues.

#### **AQ-6**

BLM will continue to work cooperatively with the Utah Airshed Group to manage emissions from wildland and prescribed fire activities.

**AQ-7**

National Ambient Air Quality Standards are enforced by the Utah Department of Environmental Quality, Division of Air Quality, with Environmental Protection Agency (EPA) oversight. Special requirements to reduce potential air quality impacts will be considered on a case-by-case basis in processing land use authorizations.

**AQ-8**

BLM will utilize BMPs and site specific mitigation measures, when appropriate, based on site specific conditions, to reduce emissions and enhance air quality. Examples of these types of measures can be found in the Four Corners Air Quality Task Force Report of Mitigation Options, November 1, 2007.

**AQ-9**

Project specific analyses will consider use of quantitative air quality analysis methods (i.e. modeling), when appropriate as determined by BLM, in consultation with state, federal, and tribal entities.

## **Soil Resources (SOL)**

### **Goals and Objectives:**

- Maintain and/or restore overall watershed health and reduce erosion, stream sedimentation, and salinization of water, with particular emphasis on the Colorado River System.
- Soils would exhibit infiltration, permeability, and erosion rates appropriate for the soil type, climate, and landform.
- Maintain and restore areas of biological soil crust appropriate for the soil type, climate, and landform.
- Maintain or enhance soil stability, productivity, and infiltration to prevent accelerated erosion and to provide for optimal plant growth and the site's potential.

### **Management Actions:**

#### **Maintaining Soil Resources**

##### **SOL-1**

Implement BMPs designed to minimize impacts on soils from ground disturbing activities, as appropriate (Appendix 1).

##### **SOL-2**

Reduce soil loss on watersheds by performing appropriate land treatments (Map 5).

##### **SOL-3**

Land treatments would be prioritized in the following fifth-field watersheds:

- Upper Sevier River Watershed:
  - Pass Creek/Sevier River
  - City Creek/Sevier River
  - Bear Creek/Sevier River.
- Upper Virgin River/Kanab Creek Watersheds:
  - Muddy Creek
  - Upper Kanab Creek
  - Skutumpah/Mill Creek.

##### **SOL-4**

Initiate reclamation of surface disturbances, where appropriate, during or upon completion of the authorized project.

##### **SOL-5**

Close and reclaim temporary roads upon completion of the project that required the roads.

**SOL-6**

Remove and reclaim facilities or improvements no longer necessary or desirable, provided no historic properties are affected.

**Sensitive/Fragile Soils**

**SOL-7**

Identify areas of “fragile soils” during preparation of project-level plans, as well as necessary mitigation measures to minimize risks and degradation.

**SOL-8**

Develop and implement site-specific restrictions and/or mitigations for activities proposed in fragile soil areas on a case-by-case basis. Surface disturbing activities must be approved by the BLM before construction and maintenance is authorized.

**SOL-9**

Allow surface disturbance in fragile soil areas as long as impacts would be mitigated or disturbance would be beneficial to rangeland health.

**SOL-10**

Preclude cross-country OHV use in areas identified as fragile soils to minimize soil loss and salinity of water runoff.

**SOL-11**

Allow land treatments (i.e., vegetation treatment and soil stabilization) in fragile soil areas where such treatment would reduce erosion and restore watersheds.

**SOL-12**

Manage land uses according to the Standards for Rangeland Health (Appendix 16) to maintain or improve soil conditions.

**SOL-13**

Incorporate BMPs and soil protection measures into developments on sensitive soils. Measures to stabilize soils and minimize surface water runoff would be required for slopes greater than 15 percent, both during project activities and following project completion.

## **Water Resources (WAT)**

### **Goals and Objectives:**

- Maintain and/or restore natural hydrologic functions of watersheds, including the capability to capture, store, and beneficially release water.
- Reduce flood-related damage to infrastructure and downstream private lands.
- Improve watershed conditions on eroding sites and on other sensitive watershed areas, such as riparian areas.
- Maintain and improve water quality to meet state standards for water quality in order to protect established beneficial uses.

### **Management Actions:**

#### **Management of Water Quality and Watershed Health**

##### **WAT-1**

Monitor water quality in coordination with the State Division of Water Quality to determine if progress toward meeting water quality standards and watershed objectives is being achieved.

##### **WAT-2**

Monitor the management activities to determine if progress toward meeting watershed objectives is being achieved. Make appropriate adjustments where and when necessary to ensure progress toward meeting watershed objectives.

##### **WAT-3**

Implement BMPs designed to protect water quality for all ground disturbing activities (Appendix 1).

##### **WAT-4**

Provide for the improvement and protection of water quality of the culinary water supply for Fredonia, Arizona, by limiting livestock grazing and OHV use above the legally approved water collection points for the city in Cottonwood and South Fork Indian Canyons.

##### **WAT-5**

Identify public water systems with surface water or groundwater sources (i.e., delineated drinking water source protection zones) that may be affected by BLM-authorized activities. Ensure that BLM-authorized activities do not pose a threat to public water systems.

##### **WAT-6**

Coordinate with local, state, tribal, and federal authorities on water- and riparian-related issues.

##### **WAT-7**

Implement BMPs designed to improve vegetation cover and reduce soil erosion for surface disturbing activities, especially with regard to sources of saline sediments in the Colorado River Basin (Appendix 1). Coordinate with the Virgin River Management Plan Watershed Advisory Committee (and other applicable committees for other Colorado River tributaries) to reduce salinity.

**WAT-8**

Improve watershed health by performing appropriate land treatments (Map 5).

**WAT-9**

Land treatments would be prioritized in the following fifth-field watersheds:

- Upper Sevier River Watershed:
  - Pass Creek/Sevier River
  - City Creek/Sevier River
  - Bear Creek/Sevier River
  
- Upper Virgin River/Kanab Creek Watersheds:
  - Muddy Creek
  - Upper Kanab Creek
  - Skutumpah/Mill Creek.

**WAT-10**

Continue to cooperatively implement the Upper Sevier River Watershed Management Plan with the Upper Sevier Watershed Committee.

**WAT-11**

Manage the Sevier River in accordance with the total maximum daily load (TMDL) and Upper Sevier River Watershed Management Plan.

**WAT-12**

Avoid or minimize impacts on water quality through the application of specific mitigation measures identified in activity-level plans.

**WAT-13**

Manage oil and gas leasing as open to leasing subject to moderate constraints to protect culinary water supply as directed by the Land Use Agreement for Kanab City Existing Wells in the following sections:

- T 42 S R 6 W Sections 19, 31
- T 42 S R 7 W Sections 23, 24, 25, 26, 27, 34, 35.

In these areas (1) oil and gas well placement would be relocated to eliminate potential contamination sources or pollution sources, and/or (2) design standards would be implemented to prevent contaminated discharges to groundwater.

**Management of Water to Meet Resource Management Objectives**

**WAT-14**

Cooperate with the State Division of Water Rights and apply for state water rights to meet resource objectives, as necessary.

**Water Resources and Discharge of Produced Waters from Energy Development Activities**

**WAT-15**

Cooperate with the Utah Division of Water Quality; Utah Division of Oil, Gas, and Mining; and affected water users to address permitting requirements for any proposed treatment, surface discharge, or underground injection of water produced during mineral exploration and production (Utah Administrative Rule R649-5, Underground Injection Control of Recovery Operations and Class II Injection Wells).

**WAT-16**

Apply coalbed natural gas BMPs to preserve groundwater quality (Appendix 1).

**WAT-17**

Encourage treatment (as needed) and onsite or offsite beneficial use of produced water, so long as that water is of adequate quality and the rate of use does not cause adverse impacts on other resources. If treatment of produced water is not practical, require reinjection or offsite disposal.

**WAT-18**

Do not allow surface discharge of produced water in the Colorado River Basin.

## **Vegetation (VEG)**

### **Goals and Objectives:**

- A mosaic of non-invasive perennial and annual vegetation communities would be present across the landscape with diversity of species, canopy, density, and age class in accordance with ecological site potential.
- Protect, enhance, and/or restore ecological processes and functions by allowing tools that are necessary and appropriate to mitigate adverse impacts of allowable uses and undesirable disturbances and which contribute to meeting the Utah BLM *Standards for Rangeland Health*.
- Sustain or reestablish the integrity of the sagebrush communities to provide the quantity, continuity, and quality of habitat necessary to maintain sustainable populations of Greater sage-grouse and other sagebrush obligate species.
- Manage rangelands to prevent net loss of properly functioning sagebrush steppe habitat.
- Contain or reduce invasive plant species from existing extent; prevent establishment of new invasive species through early detection and rapid response actions.
- Restore native species to meet desired plant community objectives where appropriate.
- Maintain health of ponderosa pine stands within the decision area.
- Maintain and/or restore riparian areas to proper functioning condition, or to making significant progress toward proper functioning condition, where BLM-managed or BLM-authorized activities have been identified as contributing to riparian impairment.
- Ensure water availability for multiple-use management and functioning, healthy riparian and upland systems.

### **Management Actions:**

#### **General Vegetation**

##### **VEG-1**

Apply Standards for Rangeland Health (Appendix 16) to all rangelands.

##### **VEG-2**

Apply Guidelines for Grazing Management on BLM Lands in Utah (BLM 1997a) and Guidelines for Recreation Management for Public Lands in Utah [BLM no date] for maintenance and rehabilitation of rangelands.

##### **VEG-3**

Rehabilitation target would be to manage for 51 percent or higher of Potential Natural Community (PNC) unless site-specific management objectives for other resources dictate otherwise (e.g., special status species adapted to 0 percent to 25 percent of PNC).

##### **VEG-4**

Identify, maintain, and restore forest and woodland old-growth stands to a pre-fire suppression condition. Adopt the U.S. Forest Service (USFS) old-growth definitions and identification

standards as per the USFS document Characteristics of Old-Growth Forests in the Intermountain Region (Hamilton 1993). In instances where the area of application in the previous document does not apply (for example, *Pinus edulis*), use the document Recommended Old-Growth Definitions and Descriptions, USDA Forest Service Southwestern Region (USFS 1992).

**Management of Riparian Areas**

**VEG-5**

Maintain and/or enhance riparian areas (Utah Riparian Management Policy 2005) through project design features and/or stipulations that protect riparian resources.

**VEG-6**

Consult with water rights holders when rights-of-way (ROW) are renewed or amended to determine if water necessary to prevent riparian and aquatic degradation could be left in-stream through design or operation stipulations.

**VEG-7**

Analyze proposed new or amended ROWs for water diversions to determine the amount of water that must be retained to prevent riparian and aquatic degradation. Incorporate design and operation stipulations as necessary to protect riparian and aquatic resources.

**VEG-8**

Monitor riparian conditions, as needed, for any surface disturbing activity that could affect riparian areas.

**VEG-9**

Retain riparian areas in the public ownership unless it can be clearly demonstrated that specific sites cannot be managed in an effective manner by the BLM or through agreements. Exchanges involving public land containing riparian areas would generally not be allowed unless it could be shown that parcels containing superior public values are being acquired or that existing riparian areas would be enhanced.

**VEG-10**

Prioritize monitoring in functioning at-risk and then non-functioning riparian areas. Additional monitoring would occur on an as-needed basis (e.g., to assess impacts of specific projects or to establish reference conditions).

**VEG-11**

Prioritize rehabilitation efforts and management adjustments in functioning at-risk and then non-functioning riparian areas where livestock grazing has been determined to be a significant contributing factor. As opportunities arise (e.g., cooperative proposals), actions would also be taken to initiate recovery and rehabilitation within the site's potential in non-functioning riparian areas.

**VEG-12**

Emphasize management of uses rather than structural efforts when rehabilitating degraded riparian areas.

**VEG-13**

As necessary and appropriate (indicated by monitoring results and interdisciplinary analysis), livestock numbers, seasons of use, and grazing systems would be modified when necessary to meet riparian objectives.

**VEG-14**

Existing and new water developments would be maintained and/or managed to reduce detrimental impacts on riparian areas (i.e., dewatering) and to change grazing management within riparian areas when grazing has been identified as a significant contributing factor.

**VEG-15**

Fencing, erosion control structures, and vegetation treatments would each be an option where changes in use would not meet management objectives within the desired time frame.

**VEG-16**

Do not allow new surface disturbing activities within 330 feet of riparian/wetland areas unless it could be shown that (1) there are no practical alternatives, (2) all long-term impacts could be fully mitigated, or (3) the activity would benefit and enhance the riparian area.

**VEG-17**

Maintain sufficient water, to the extent possible, to sustain native flora and fauna when developing/redeveloping springs. Return unused or overflow water to its original drainage.

**Plant and Seed Collection**

**VEG-18**

Permit commercial seed collection. Areas and species available for commercial collection would be determined on a case-by-case basis as climatic conditions allow, in accordance with statewide guidance and policy.

**VEG-19**

Allow vegetation materials use (excluding seed collection, which is addressed above; pine nut harvest; and forest and woodland products) and collection in specified areas identified by permit on a case-by-case basis as climatic conditions allow.

**VEG-20**

Allow the collection/harvesting of vegetative materials in riparian areas in proper functioning condition on a case-by-case basis as climatic conditions allow.

**VEG-21**

Allow Native American non-commercial traditional use of vegetation products for the collection of herbs, medicines, traditional use items, or items necessary for traditional, religious, or ceremonial purposes, through permits.

**Noxious Weeds and Invasive Species**

**VEG-22**

Implement noxious weed and invasive species control actions as per national guidance and local weed management plans in cooperation with state and federal agencies, affected counties, adjoining private land owners, and other interests directly affected.

**VEG-23**

Apply approved weed control methods to all invasive species in an integrated weed management program (including preventive management; education; and mechanical, biological, wildland or prescribed fire, and chemical techniques).

**VEG-24**

Use minimum tool analysis (in designated wilderness) or the non-impairment standard (in WSAs) to identify vegetation treatment methods and approved herbicides to treat invasive plants such as tamarisk and Russian olive for the purpose of restoring ecological conditions and functions.

**VEG-25**

Require certified weed-free feed for all stock to limit the introduction and spread of noxious weeds and other undesirable species.

**Relict Plant Communities and Hanging Gardens**

**VEG-26**

Manage relict plant communities and hanging gardens to maintain and enhance the biological diversity and health of these areas.

**VEG-27**

Restrict surface occupancy (NSO) for surface disturbing activities to protect relict vegetation at Diana's Throne and Elephant Butte.

**VEG-28**

Recommend Diana's Throne and Elephant Butte for withdrawal from mineral entry.

**VEG-29**

Protect hanging gardens by implementing the no surface disturbance actions identified in the Riparian section of this chapter.

**Sagebrush Steppe**

**VEG-30**

Treat sagebrush steppe communities to restore natural disturbance processes and a healthy, diverse mosaic of different height and age structures with components of native grasses and forbs and an appropriate pinyon-juniper component for a given ecological site. Mosaics may include stands of young and old sagebrush, openings (ranging from bare ground to short or sparse vegetation to high-density grasslands), wet meadows, seeps, healthy streamside (riparian) vegetation, and other interspersed shrub and woodland habitats.

### **VEG-31**

Follow the Connelly guidelines (Connelly et al. 2000) for vegetation treatment prescriptions for projects occurring in occupied and/or historic Greater sage-grouse habitat. Adjust and/or modify these guidelines with cooperators (e.g., Utah Division of Wildlife Resources [UDWR], local sage-grouse working group, and Utah Partners for Conservation and Development, as necessary, within the range of variability described in the appropriate ecological site description.

### **Vegetation Restoration Treatments**

### **VEG-32**

Limit acres of vegetation treatments (e.g., wildlife habitat treatments, watershed treatments, livestock rangeland treatments, wildland fire use, fuels treatments, and stewardship contracting) to an annual average of no more than 22,300 acres (446,000 acres over the life of the plan).

### **VEG-33**

Use the full range of upland vegetation treatment methods and tools (i.e., prescribed fire, mechanical, chemical, biological, woodland product removal, and wildland fire use).

### **VEG-34**

Vegetation treatments may be authorized where protection of sensitive resources would be ensured.

### **VEG-35**

Focus restoration or vegetation treatment projects based on the following factors:

- Restore areas functioning at less than 51 percent of PNC
- Restore areas with noxious weed and/or non-native invasive plants
- Maintain previously treated areas
- Achieve other objectives identified in this RMP
- Restore special status species habitats to achieve long-term conservation and recovery objectives
- Achieve rangeland health objectives.

### **VEG-36**

Manage areas with ponderosa pine to maintain the stand health through use of stand health exams, vegetation treatments, wildland fire, and prescriptions on permitted activities on a case-by-case basis. Manage stands to be predominantly park like, resilient to low-intensity fire, and have normally expected levels of mortality.

### **VEG-37**

Focus treatment objectives in ponderosa pine vegetation communities on restoring natural disturbance processes such as fire; increasing vegetative ground cover of native grasses, forbs, and shrubs; and removing invasive, non-native species.

## **Special Status Species (Threatened, Endangered, and Sensitive) (SSS)**

### **Goals and Objectives:**

- Maintain, protect, and recover habitats of federally listed threatened, endangered, or candidate plant, animal, or fish species, and actively promote recovery to the point that provisions of the Endangered Species Act (ESA) are no longer required.
- Maintain, protect, and enhance habitats of the latest Utah BLM State Director's sensitive plant and animal species list to ensure that BLM-authorized or approved actions are consistent with the conservation needs of the species and do not contribute to the need to list any species under the ESA.
- Cooperate with the U.S. Fish and Wildlife Service (USFWS) and other agencies, such as UDWR, in managing special status species and their habitat.
- Allow, initiate, and/or participate in scientific research of listed and sensitive species and their habitats.
- To the maximum extent possible, maintain habitat connectivity and avoid habitat fragmentation for special status plant and animal species.
- Develop and implement conservation measures to minimize long-term habitat fragmentation through avoidance and site-specific reclamation in order to provide the habitat quality and quantity to meet ecological requirements and support a natural diversity of species.

### **Management Actions:**

#### **Special Status Species Conservation and Habitat Enhancement**

##### **SSS-1**

Implement Recovery Plan, Conservation Agreement, and Strategy decisions to increase populations and improve habitat of special status species, including federally listed species, by enhancing, protecting, and restoring occupied and potential habitat.

##### **SSS-2**

Collaborate with the appropriate local, state, and federal agencies to promote public education on species at risk, their importance to the human and biological community, and reasons for protective measures that would be applied to the lands involved.

##### **SSS-3**

Develop and implement monitoring and conservation measures for listed and non-listed special status species and their habitats where land use and human disturbances have been identified as having potential for adverse impacts.

##### **SSS-4**

Incorporate USFWS references for listed species, designated critical habitat, down-listed or de-listed species, and non-listed special status species into management actions authorized within the decision area.

**SSS-5**

Work with the UDWR to implement the Utah Comprehensive Wildlife Conservation Strategy (UDWR 2005a) to coordinate management actions that would conserve native species and prevent the need for additional listings (WO IM 2006-114).

**SSS-6**

Apply lease notices and conservation measures (Appendix 9) to leases and other applicable activities occurring in special status species habitat.

**SSS-7**

Avoid, control, or regulate surface disturbing and disruptive activities on a case-by-case basis to minimize impacts on identified crucial habitat for sensitive species for the purpose of protecting these species and their associated habitats.

**SSS-8**

Should special status species be found, temporarily stop surface disturbing and disruptive activities until species-specific protective and/or mitigative measures are developed and implemented, in consultation with USFWS and/or UDWR when applicable.

**SSS-9**

Apply BMPs to avoid or reduce fragmenting habitat, including:

- Collocating communication and other facilities
- Employing directional drilling for oil and gas
- Using topographic and vegetative screening to reduce the influence of intrusions.

**SSS-10**

The BLM will approach compensatory mitigation on an “as appropriate” basis where it can be performed on site, and on a voluntary basis where it is performed offsite, or in accordance with current guidance.

**Bald Eagles and Other Special Status Raptor Species**

**SSS-11**

Implement conservation measures (Appendix 9) on actions affecting bald eagles or their habitat.

**SSS-12**

Do not authorize future ground disturbing activities within ½ mile of active bald eagle nest sites year-round. Deviations may be made only after appropriate levels of consultation and coordination with USFWS.

**SSS-13**

Manage stands of ponderosa pine for winter roosting sites for bald eagles and nesting sites for other raptors (see Vegetation section for specific management).

**SSS-14**

Use BMPs (Appendix 2) to implement raptor guidelines established by USFWS.

**SSS-15**

Work with UDWR to identify locations for all known special status raptor species nests, roost sites, and winter roost sites on or within ½ mile of BLM lands.

**SSS-16**

Prohibit surface disturbing activities within ½ mile around special status raptor species nest sites during the following time periods:

- Mar 1–Aug 1: Ferruginous hawk
- Mar 1–Aug 15: N. Goshawk.

**SSS-17**

Prohibit surface disturbing activities within ¼ mile around special status raptor species nest sites during the following time periods:

- Mar 1–Aug 1: Short-eared owl
- Mar 1–Aug 31: Burrowing owl.

**SSS-18**

Comply with Suggested Practices for Raptor Protection on Power Lines: The State of the Art in 2006 (Avian Power Line Interaction Committee 2006) and Avian Protection Plan (APP) Guidelines (Avian Power Line Interaction Committee and USFWS 2005) for new powerline construction (including upgrades and reconstruction) to prevent electrocution of raptors.

**SSS-19**

Protect unoccupied special status species raptor nests in compliance with BLM’s raptor BMPs (Appendix 2).

**California Condor**

**SSS-20**

Avoid disruptive activities in California condor communal roosting or nesting areas. Appropriate measures would depend on whether the proposed activity is temporary or permanent, and whether it occurs within or outside the condor nesting season. (A temporary action is completed outside of the breeding season, leaving no permanent structures and resulting in no permanent habitat loss. A permanent action continues for more than one breeding season and/or causes a loss of condor habitat or displaces condors through disturbances, i.e., creation of a permanent structure.)

**SSS-21**

Apply the following avoidance and minimization measures:

- Surveys could be required prior to implementation of a proposed action to determine presence/absence if information suggests birds could be present. Surveys must be conducted by qualified individuals, be conducted according to protocol, and be acceptable to the BLM.
- Preclude disruptive activities within 1 mile of a California condor nest site during the breeding season.

- Monitor recreation uses within 1 mile of condor nest sites and temporarily restrict activities if necessary to protect the condor.
- Preclude special use permit group events within 1 mile of condor nest sites during the breeding season.
- Preclude placement of new permanent structures or roads within 1 mile of condor nest sites.

**Utah Prairie Dog**

**SSS-22**

Implement conservation measures (Appendix 9) on actions affecting Utah prairie dogs or their habitat.

**SSS-23**

Permit no surface disturbing activities or surface occupancy within ½ mile of active, suitable (currently inactive), or potential reintroduction (BLM 2002b) Utah prairie dog habitats/sites. Seismic activities would avoid these areas, particularly during the active season (April 1 to September 30).

**SSS-24**

Allow introduction, augmentation, restocking, translocations, transplantation, and/or reestablishments of special status species in cooperation and collaboration with USFWS, UDWR, and other agencies as necessary, subject to guidance provided by BLM's 6840 policy and by existing or future memoranda of understanding (MOU).

**SSS-25**

Require deterrent devices designed to prevent raptors from perching on powerline structures on all new construction (including upgrades and reconstruction) to discourage predation on Utah prairie dogs.

**SSS-26**

Reroute renewed or amended ROWs on public land that have the potential to disturb active and inactive Utah prairie dog colonies.

**SSS-27**

Preclude cross-country OHV use in occupied or inactive Utah prairie dog colonies.

**SSS-28**

Allow for the treatment of plague and other diseases that may impact Utah prairie dogs.

**Mexican Spotted Owl**

**SSS-29**

Implement conservation measures (Appendix 9) on actions affecting MSOs or their habitat.

**SSS-30**

Restrictions (from the Utah Field Office Guidelines for Raptor Protection From Human and Land Use Disturbances [Appendix 2]) include:

- Permit no surface disturbing activities from March 1 to August 31 in PACs, breeding habitats, or designated critical habitat to avoid disturbance to breeding MSOs.
- If a disruptive or surface disturbing action occurs entirely outside of the MSO breeding season (March 1 to August 31) and leaves no permanent structure or permanent habitat disturbance, the action may proceed without an occupancy survey. Land disposal actions would require breeding season surveys (see Lands and Realty management actions).
- If disruptive actions would occur during the season restriction (March 1 to August 31), surveys according to USFWS protocol for MSOs would be required prior to commencement of activities. If MSOs are detected, activities should be delayed until after the seasonal restriction.

**SSS-31**

Retain, where appropriate, large down logs, large trees (generally greater than 24 inches in diameter at breast height [DBH]), and snags as prey habitats in occupied and suitable MSO habitat.

**SSS-32**

Allow fuels treatments and prescribed fire on a case-by-case basis to reduce fire hazard and improve habitat condition for MSO prey.

**SSS-33**

Meet or make significant progress toward meeting BLM Utah's Standards for Rangeland Health in protected and restricted (as defined in recovery plan) MSO habitats.

**SSS-34**

Prohibit new recreation facilities or trails within PACs. Continue maintenance restrictions and seasonal closure (March 1 to August 31) of existing facilities. Comply with conservation measures in Appendix 9.

**SSS-35**

Limit special recreation permit (SRP) group size to 12 or fewer according to the recovery plan in protected and restricted (as defined in the recovery plan) MSO habitat.

**Bonneville Cutthroat Trout, Roundtail Chub, Bluehead Sucker, and Flannelmouth Sucker**

**SSS-36**

Monitor stream habitat to detect changes every 5 to 10 years in streams with historic or currently occupied habitat, in cooperation with UDWR.

**SSS-37**

Maintain or improve stream habitat for those locations with historic or currently occupied habitat identified in cooperation with UDWR. Maintain, improve, or provide missing habitat components using appropriate habitat improvement techniques.

**Federally Listed and Candidate Plants**

**SSS-38**

Surveys would be required prior to surface disturbance unless species presence and distribution information is complete and available. Surveys would be conducted by a BLM-approved botanist. In the event species presence is verified, the project proponent may be required to modify operational plans, at the discretion of the authorized officer, to include appropriate protection and/or avoidance measures or practices for the minimization of impacts on listed and candidate plants and their habitats.

**SSS-39**

Initiate Section 7 consultation with USFWS for any planned or authorized activity that is determined to have the potential to result in an impact on listed and candidate plants and their habitats.

**SSS-40**

Implement the Siler's pincushion cactus recovery plan.

**SSS-41**

Manage oil and gas leasing as open subject to moderate constraints (CSU) in federally listed and candidate plant species occupied and suitable habitat. In these areas, well placement would be located to not adversely affect the species or their habitats.

**SSS-42**

Limit species for rehabilitation and emergency stabilization in federally listed and candidate species habitat to species that would not inhibit the listed or candidate species.

**Welsh's Milkweed**

**SSS-43**

Implement applicable portions of the Welsh's Milkweed (*Asclepias welshii*) Recovery Plan. Consider new scientific information obtained since completion of the recovery plan. Include this information and management guidance in a joint management plan to be prepared by the BLM and the State of Utah.

**SSS-44**

Close approximately 790 acres of designated critical milkweed habitat on the BLM-administered portion of the Coral Pink Sand Dunes to OHV use.

**SSS-45**

Manage oil and gas leasing as open subject to major constraints (NSO) in Welsh's milkweed designated critical habitat.

**Coral Pink Sand Dunes Tiger Beetle**

**SSS-46**

Implement the conservation actions identified in the Conservation Agreement and Strategy for the Coral Pink Sand Dunes Tiger Beetle, as amended.

**SSS-47**

Maintain the established 370-acre tiger beetle conservation area on BLM-administered lands in the northeast corner of the sand dunes.

**Western Yellow-Billed Cuckoo and Southwestern Willow Flycatcher**

**SSS-48**

Implement conservation measures (Appendix 9) on actions affecting Southwestern willow flycatcher or its habitat.

**SSS-49**

Manage for regeneration and multiple age classes in cottonwood/willow vegetation in yellow-billed cuckoo and Southwestern willow flycatcher habitat.

**SSS-50**

Identify sites where Southwestern willow flycatcher habitat restoration (i.e., occupied, suitable, and potentially suitable sites) is warranted. Prioritize riparian restoration in Southwestern willow flycatcher habitat consistent with riparian rehabilitation decisions in the Water section.

**SSS-51**

Prohibit surface disturbing activities within ¼ mile of occupied breeding habitat from May 1 to August 15.

**SSS-52**

Where possible, collocate roads, new trails, and ROWs and develop stream crossings at right angles to yellow-billed cuckoo and Southwestern willow flycatcher habitat to minimize impacts.

**Management of Greater Sage-Grouse Habitat**

**SSS-53**

Implement the most current UDWR Strategic Management Plan for Sage-Grouse (UDWR, 2002 and its future revisions), the BLM National Sage-Grouse Habitat Conservation Strategy (BLM, 2004), and recommendations from local sage-grouse working groups to protect, maintain, enhance, and restore Greater sage-grouse populations and habitat.

**SSS-54**

All surface disturbing activities would be prohibited within ½ mile of Greater sage-grouse leks on a year-round basis. Oil and gas leasing would be open subject to major constraints (NSO).

**SSS-55**

Allow no surface disturbing or otherwise disruptive activities within 2 miles of Greater sage-grouse leks from March 15 to July 15 to protect nesting and brood rearing habitat. Oil and gas leasing would be open subject to a controlled surface use and timing stipulation.

**SSS-56**

Allow no surface disturbing or otherwise disruptive activities within Greater sage-grouse winter habitat from December 1 – March 14. Oil and gas leasing would be open subject to a controlled surface use and timing stipulation.

**SSS-57**

See Appendix 3 for exceptions, modifications, or waivers.

**SSS-58**

Prioritize habitat vegetation treatments to maintain and/or improve habitat function in the following areas (Map 5):

- Sage-grouse nesting and brood-rearing habitat
- Sage-grouse winter range.

**Management of Pygmy Rabbit Habitat**

**SSS-60**

Apply restrictions (e.g., avoidance or mitigation) to surface disturbing and disruptive activities on a case-by-case basis in occupied and potential pygmy rabbit habitat for the protection of this species and its associated habitat. Site-specific NEPA documentation would address restrictions around pygmy rabbit habitat.

**Recovery Plan Actions for Special Status Species**

**SSS-61**

Consider and implement the appropriate guidelines and management recommendations presented in current and future species recovery or conservation plans (as revised), or alternative management strategies developed in consultation with USFWS and/or UDWR.

## **Fish and Wildlife (WL)**

### **Goals and Objectives:**

- Maintain habitat quantity and quality (forage, water, cover, space, and security) sufficient to sustain diverse wildlife populations, meeting objectives identified in cooperation with UDWR where applicable.
- Maintain and/or improve aquatic stream habitat to support productive and diverse fisheries and other aquatic populations.
- Maintain habitat connectivity and unrestricted wildlife movement between ecological zones to the maximum extent possible.
- Maintain and enhance aquatic and wildlife resources and provide for biological diversity of plants and wildlife resources while ensuring healthy ecosystems.
- Manage habitats on an ecosystem basis, ensuring that all parts of the ecosystem on public lands are preserved.
- Conserve habitat for migratory birds as directed by Executive Order 13186 (Responsibilities of Federal Agencies to Protect Migratory Birds) and the Migratory Bird Treaty Act and emphasize management of migratory birds listed on the USFWS current list of Birds of Conservation Concern (BCC) and the Partners-in-Flight (PIF) priority species.

### **Management Actions:**

#### **Important Wildlife and Fish Habitat**

##### **WL-1**

Consider the USFWS BCC and the Utah PIF Priority Species to identify and conserve priority nesting habitats for migratory birds.

##### **WL-2**

Use Best Management Practices for Raptors and Their Associated Habitats in Utah (Appendix 2) to guide raptor management, using seasonal and spatial buffers and mitigation to maintain and enhance raptor nesting, foraging, and roosting habitat while allowing other resource uses to occur.

##### **WL-3**

Work cooperatively with other agencies, such as UDWR or Utah Partners for Conservation and Development, to identify and manage habitat for non-listed fish and wildlife species.

##### **WL-4**

Allow, initiate, and/or participate in scientific research of species and their habitats.

##### **WL-5**

Complete and assist with inventories and map current occupied and potential habitats for species.

##### **WL-6**

Conduct habitat improvement treatments for species in accordance with current species-specific guidelines and local working group prescriptions.

**WL-7**

Prioritize Bird Habitat Conservation Areas identified in the Coordinated Implementation Plan for Bird Conservation in Utah (IWJV 2005, as updated) for conducting bird habitat conservation projects through cooperative funding initiatives such as the Intermountain West Joint Venture.

**WL-8**

Coordinate predator management with U.S. Department of Agriculture Animal and Plant Health Inspection Service/Wildlife Services and UDWR in accordance with the guidance provided in the existing MOU with Animal and Plant Health Inspection Service/Wildlife Services.

**WL-9**

Maintain existing vegetation treatments that benefit wildlife.

**WL-10**

Prioritize habitat vegetation treatments to maintain and/or improve habitat function in areas of crucial mule deer winter range (Map 5).

**WL-11**

Road crossings of water bodies that support fish would be designed to provide for fish passage.

**Management of Deer and Elk Habitats**

**WL-12**

Preclude surface disturbing activities in crucial mule deer and elk winter range from November 15 to April 15 unless the activity would improve mule deer or elk habitat.

**WL-13**

Preclude oil and gas exploration and development and ROW construction/reconstruction in identified big game migration and transitional ranges from October 1 to November 15.

**WL-14**

Limit OHV use to designated routes.

**Management of Bighorn Sheep Habitats**

**WL-15**

Preclude surface disturbing activities in crucial Desert bighorn sheep habitat during lambing season (April 15 to June 15) (Bighorn Institute 2008).

**WL-16**

Do not authorize changes in kind of livestock to sheep or goats within 9 miles of Desert bighorn sheep habitat.

**Management of Pronghorn Habitat**

**WL-17**

Preclude surface disturbing activities in crucial pronghorn habitat from May 15 through June 15 during fawning season.

**Management of Habitat to Provide for Wildlife Management Objectives as Established by UDWR**

**WL-18**

Require wildlife-passable fences, consistent with the species found in the area, and essential for effective range management or other administrative functions.

**WL-19**

Continue to work with UDWR and conservation organizations to establish additional water developments, subject to NEPA consideration, and maintain existing water developments to improve wildlife distribution and encourage habitat use by native wildlife species and introduced non-native species.

**WL-20**

Authorize construction of wildlife habitat improvement projects (including water developments and vegetation treatments) to meet wildlife goals and objectives, provided that the project complies with NEPA, ESA, and other applicable laws and policies.

**WL-21**

Retain crucial wildlife habitat in public ownership, unless the land tenure adjustment would meet one or more of the land tenure adjustment criteria identified in Lands and Realty management.

**WL-22**

Develop present use area water needs for wildlife as capabilities exist; maintain water throughout the spring and fall in existing and new livestock range improvements (e.g., tanks and pipelines).

**WL-23**

Manage livestock grazing in riparian areas/fisheries habitat according to the Utah Guidelines for Grazing Management. Livestock grazing in riparian areas/fisheries habitat would be evaluated through compliance with the Standards for Rangeland Health.

**WL-24**

Minor adjustments to crucial wildlife habitat boundaries periodically made by UDWR would be accommodated through plan maintenance.

**Management of Raptor Habitats**

**WL-25**

Implement raptor guidelines associated with level of duration of activities established by USFWS.

**WL-26**

Guide raptor habitat management by use of Best Management Practices for Raptors and Their Associated Habitats in Utah (Romin and Muck 2002, as amended) and BLM's raptor BMPs (Appendix 2) using seasonal and spatial buffers and mitigation to maintain and enhance raptor nesting, foraging, and roosting habitat while allowing other resource uses to occur.

**WL-27**

Prohibit disruptive activities within 1 mile of peregrine falcon nest sites from February 1 to August 31.

**WL-28**

Prohibit disruptive activities to nesting raptors within ½ mile of raptor nests during the following time periods:

- Jan 1–Aug 31: golden eagle
- Mar 15–Aug 15: red-tailed hawk
- Mar 15–Aug 31: Cooper’s hawk, sharp-shinned hawk
- Mar 1–Aug 31: Swainson’s hawk
- Apr 1–Aug 15: Northern harrier
- Apr 1–Aug 31: merlin, osprey
- May 1–Aug 15: Turkey vulture.

**WL-30**

Prohibit disruptive activities to nesting raptors within ¼ mile of a raptor nest during the following time periods:

- Dec 1–Sep 31: Great-horned owl
- Feb 1–July 31: boreal owl
- Feb 1–Aug 15: long-eared owl
- Mar 1–Aug 15: W. screech owl
- Mar 1–Aug 31: N. saw-whet owl
- Apr 1–Aug 1: N. pygmy owl
- Apr 1–Aug 31: prairie falcon
- Apr 1–Sep 30: Flammulated owl.

**WL-29**

Protect unoccupied raptor nests in compliance with BLM’s raptor BMPs (Appendix 2) yet allow for permanent (long-term) facilities and structures to be constructed within the spatial buffer zone, identified above by alternative, outside of the breeding season as long as they would not cause the nest site to become unsuitable for future nesting. Non-permanent (short-term) activities would be allowed within the spatial buffer of nests during the nesting season as long as those activities are shown to be non-impacting to nesting raptors.

**Fish and Wildlife Reintroductions**

**WL-30**

Allow introduction, translocation, transplantation, restocking, augmentation, and reestablishment of native and naturalized fish and wildlife species in cooperation and collaboration with UDWR, subject to guidance provided by BLM’s 1745 policy and by existing or future MOUs with UDWR.

**Management of Forage Allocations for Big Game Species (as established by the Division of Wildlife Resources)**

**WL-31**

Allocate 11,045 AUMs to wildlife as shown in the grazing allotment forage allocation table (appendix 14)

**Compensatory Mitigation**

**WL-32**

The BLM will approach compensatory mitigation on an “as appropriate” basis where it can be performed on site, and on a voluntary basis where it is performed offsite, or in accordance with current guidance.

**Wildland Fire Ecology (FIRE)**

**Goals and Objectives:**

- Firefighter and public safety would be the primary goal in all fire management decisions and actions.
- Wildland fire would be used to protect, maintain, and enhance resources and, when possible, be allowed to function in its natural ecological role.
- Hazardous fuels would be reduced to restore ecosystems; protect human, natural, and cultural resources; and reduce the threat of wildfire to communities.
- Fires would be suppressed at minimum cost, taking into account firefighter and public safety and benefits and values to be protected, consistent with resource objectives.
- The BLM would provide a consistent, safe, and cost-effective fire management program through appropriate planning (50 Code of Federal Regulations [CFR] 402, Counterpart Regulations), staffing, training, equipment, and management.
- Every area with burnable vegetation would have a Fire Management Plan (FMP) based on a foundation of sound science.
- Emergency stabilization, rehabilitation, and restoration efforts would be undertaken to protect and sustain resources, public health and safety, and community infrastructure.
- The BLM would work together with its partners and other affected groups and individuals to reduce risks to communities and restore ecosystems.
- The general Desired Wildland Fire Condition (DWFC) is to have ecosystems that are at a low risk of losing ecosystem components following wildfire and that function within their historical range. In terms of Fire Regime Condition Class (FRCC), the DWFC outside Wildland-Urban Interface (WUI) is to trend to a lower FRCC using the least intrusive methods possible. In other words, the DWFC is to move lands in FRCC 3 to FRCC 2 and lands in FRCC 2 to FRCC 1 through fire and non-fire treatments where wildland fire use is the preferred method of treatment, when feasible. Inside the WUI, the general DWFC is to have less potential for values to be threatened by wildland fire, usually through some modification of fuels. Table 1 identifies DWFC by major vegetation type and actions needed to meet DWFC.

**Table 1. DWFC by Major Vegetation Group and Actions Needed to Meet DWFC**

Major Vegetation Group	DWFC and Actions Needed to Meet DWFC
Salt Desert Scrub	<p>The DWFC, both outside and inside the WUI, is native, open salt desert scrub vegetation with little to no invasive species cover. Fire would be mostly excluded from these vegetation types. Due to the historical lack of surface fuels, the historical fire-return interval is extremely infrequent.</p> <ul style="list-style-type: none"> <li>• Due to the historical lack of fire and current potential for cheatgrass invasion, do not allow wildland fire to burn into salt desert scrub vegetation types. Wildland fire is not desired due to the high potential for cheatgrass invasion following wildfire and loss of native salt desert scrub communities.</li> <li>• Treat salt desert scrub types using a combination of mechanical, chemical, seeding, and biological treatments to reduce cheatgrass cover and restore native communities. Prescribed fire may be used</li> </ul>

Major Vegetation Group	DWFC and Actions Needed to Meet DWFC
	<p>in conjunction with seeding when part of a cheatgrass control objective.</p> <ul style="list-style-type: none"> <li>• Due to the high incidence of cheatgrass in this vegetation type, consider seeding following any surface disturbing activity.</li> <li>• Following wildland fire, aggressively seed to reduce potential for cheatgrass and other noxious weed invasion.</li> </ul>
Pinyon-Juniper Woodland	<p>Where pinyon and juniper occurred historically, the DWFC outside and inside the WUI is open stands of pinyon and juniper with native grass and shrub understory. Where pinyon and juniper did not occur historically, the DWFC is the native shrub, grass, and forest communities that the pinyon and juniper have invaded. The historical role of fire (estimated 15- to 50-year fire-return interval) prevented encroachment of pinyon and juniper into other vegetation communities. Most pinyon and juniper encroachment has occurred in the past 100 years. Follow treatments with seeding in FRCC 2 and FRCC 3 stands that lack native understory vegetation. Historical occurrence of pinyon and juniper is difficult to map, but pre-settlement trees are generally located in shallow, rocky soils and tend to have unique growth form characterized by rounded, spreading canopies; large basal branches; large irregular trunks; and furrowed fibrous bark. Historic fire-return intervals in these protected sites are more than 100 years.</p> <ul style="list-style-type: none"> <li>• When possible, allow wildland fire to play its natural role, which mimics the historical fire-return interval and severity in FRCC 1 and FRCC 2 lands that have some cover of native understory vegetation. Due to the high risk of losing key ecosystem components in FRCC 2 (lacking native understory vegetation) and FRCC 3 lands, avoid wildland fires in these areas. Prescribed fires should be applied to pinyon and juniper communities when native surface fuels will carry fire and when there is low risk of invasive species.</li> <li>• Prescribed fire should be used to approximate historical fire-return intervals and promote recovery of the pre-settlement vegetation cover types. Remove most young (less than 100 years old) pinyon and juniper trees through fire or mechanical treatments. In the WUI, construct fuel breaks between BLM and private land or other values at risk.</li> <li>• Following wildfire in FRCC 3 (and some FRCC 2 areas that are lacking native understory vegetation), aggressively seed to reduce invasive species establishment and to restore native communities.</li> </ul>
Sagebrush	<p>The DWFC, outside and inside the WUI, is healthy sagebrush defined as diverse age classes with an understory of native grasses and forbs. Research suggests that stand-replacement should be burned every 10 to 100 years depending on the particular sagebrush species and its associated habitat. Fire management actions in sagebrush must be carefully balanced between invasive species concerns, wildlife habitat, and the need to restore fire.</p> <ul style="list-style-type: none"> <li>• When possible, allow wildland fire to play its natural role, which mimics the historical fire-return interval and severity in FRCC 1 and FRCC 2 lands that have a low potential for cheatgrass invasion. Areas with low potential for cheatgrass invasion include higher elevation sites and/or sites that have very low incidence of</li> </ul>

Major Vegetation Group	DWFC and Actions Needed to Meet DWFC
	<p>cheatgrass pre-fire.</p> <ul style="list-style-type: none"> <li>• Treat dense sagebrush (more than 30 percent) with fire, mechanical, or chemical treatments to reduce sagebrush canopy cover and improve native grass and forb density and cover; an additional objective in treating sagebrush is to remove encroaching pinyon and juniper trees. In the WUI, construct fuel breaks between BLM and private land (or other values at risk) in dense stands of sagebrush.</li> <li>• Following wildfire in FRCC 2 and FRCC 3 lands, aggressively seed to promote native understory grasses and forbs and reduce invasion of cheatgrass and noxious weeds. Consider including sagebrush in seeding mixes or planting sagebrush seedlings in high-value wildlife areas following large, high-severity wildfires when natural seed sources would be lacking.</li> </ul>
Grassland	<p>Where native grasslands occurred historically, the DWFC outside the WUI is native grass and forb communities. Native grasslands have been lost to pinyon and juniper encroachment, cheatgrass invasion, and non-native plant seedlings (e.g., crested wheatgrass, perennial ryegrass, etc.). Where non-native grasslands occur, the DWFC is the restoration of the native grassland or shrub community. The historical role of fire in Utah's grasslands is similar to pinyon and juniper and sagebrush community types with fires every 15 to 50 years.</p> <ul style="list-style-type: none"> <li>• When possible, allow fire to play its natural role, which mimics the historical fire-return interval and severity.</li> <li>• Treat native grasslands with fire, mechanical, or chemical treatments to reduce encroaching trees (mainly juniper), shrubs, and invasive plants. Fire treatments alone should be avoided where there is potential for cheatgrass invasion (areas below 7,000 feet elevation that have adjacent cheatgrass populations). In the WUI, consider green stripping between BLM and private lands and other values at risk.</li> <li>• Following wildfire in FRCC 2 and FRCC 3 lands, aggressively seed to reduce potential for cheatgrass and other invasive weeds</li> </ul>
Mountain Shrub	<p>The DWFC outside of the WUI is stands with patches of differing age classes. In the WUI, the DWFC is greatly reduced vegetation density or a conversion to less-flammable vegetation between BLM and private lands or other values at risk.</p> <ul style="list-style-type: none"> <li>• When possible, allow fire to play its natural role, which mimics the historical fire-return interval and severity in all FRCCs.</li> <li>• Treat large expanses of even-aged, dense, homogeneous stands to result in patches of diverse age classes. To achieve greater habitat diversity and decreased potential for large-scale high-severity fire, reduce invasion of pinyon and juniper and reduce the average age of stands through fire, mechanical, or biological (e.g., grazing goats) treatments. In the WUI, consider aggressive vegetation manipulation to create fire breaks in highly flammable shrub types (e.g., Gambel oak) when there are values at risk.</li> <li>• Because most of these species sprout following wildfire, consider seeding only to reduce potential for invasive weeds.</li> </ul>

Major Vegetation Group	DWFC and Actions Needed to Meet DWFC
Mixed Conifer	<p>The DWFC outside the WUI is landscapes with a mosaic of age classes. In the WUI, the DWFC is reduced canopy density and reduced ladder fuels between BLM and private lands and other values at risk.</p> <ul style="list-style-type: none"> <li>• When possible, allow fire to play its natural role, which mimics the historical fire-return interval and severity in FRCC 1 and FRCC 2 stands. In FRCC 3 stands (dense stands with high fuels loadings), consider mechanical treatments prior to reintroducing fire.</li> <li>• Treat areas to result in a landscape of diverse age classes while retaining patches of large old trees. In the WUI, remove ladder fuels and create shaded fuel breaks between BLM and private land when values are at risk.</li> <li>• Consider tree planting following wildland fire to restore or rehabilitate the forest resource to promote forest regeneration.</li> </ul>
Ponderosa Pine	<p>The DWFC, outside and inside the WUI, is open stands with a native grass and forb understory.</p> <ul style="list-style-type: none"> <li>• When possible, allow fire to play its natural role, which mimics the historical fire-return interval and severity. Restore fire (natural or prescribed fire) to FRCC 1 and FRCC 2 stands.</li> <li>• Consider mechanical treatments in dense FRCC 3 stands until they reach a lower FRCC before restoring fire. Reduce juniper encroachment through fire (preferred when fuels conditions allow) or mechanical treatments. In the WUI, remove ladder fuels and create fuel breaks between BLM and private land and other values at risk.</li> <li>• Following wildfires, consider seeding to reduce invasive weeds and planting ponderosa pine seedlings for forest restoration and rehabilitation.</li> </ul>
Riparian Wetland	<p>The DWFC, outside and inside the WUI, is riparian and wetland areas with the appropriate composition of native species (e.g., reduction of tamarisk and other invasive species).</p> <ul style="list-style-type: none"> <li>• When possible, allow fire to play its natural role, mimicking the historical fire-return interval and intensity. Allow low to moderate severity fire to burn into riparian and wetland areas when natural ignitions are managed as wildland fire use.</li> <li>• Restore native riparian and wetland species through fire and mechanical treatments. Reduce flammable invasive species along riparian corridors (e.g., tamarisk) through mechanical, chemical, biological, and fire treatments. For prescribed fire, allow low-intensity fire to back into riparian and wetland areas through ignition outside of these areas. Mechanical treatment as the initial treatment would be emphasized where there is a moderate to high potential for riparian and wetland to be burned to a high severity.</li> <li>• Consider active restoration options when native riparian and wetland communities are unlikely to recover with passive restoration (due to invasive species, stream bank erosion, etc.).</li> </ul>
Aspen	<p>The DWFC, outside and inside the WUI, is healthy clones with diverse age classes represented and ample regeneration.</p> <ul style="list-style-type: none"> <li>• When possible, allow fire to play its natural role, mimicking the</li> </ul>

Major Vegetation Group	DWFC and Actions Needed to Meet DWFC
	<p>historical fire-return interval and severity in all FRCCs, because aspen readily sprouts following fire.</p> <ul style="list-style-type: none"> <li>• Treat aspen stands with fire or mechanical treatments to reduce encroaching junipers and conifers and to stimulate sprouting. If treated aspen stands are small, consider excluding big game and livestock until the regeneration can withstand grazing. In the WUI, consider increasing aspen cover if possible to create a shaded fuel break between private land (and other high-value areas) and the more flammable conifer trees on BLM land.</li> <li>• Following wildfire, most aspen stands would need little stabilization, except soil stabilization on steep slopes. However, burned areas may need to be fenced to exclude wildlife and livestock until the regeneration can withstand grazing.</li> </ul>

Source: BLM 2005c

**Management Actions:**

**FIRE-1**

The September 2005 completion of the Finding of No Significant Impact and Decision Record (UT-USO-04-01) for the Utah Land Use Plan Amendment for Fire and Fuels Management amended the wildland fire ecology portions of the existing LUPs. No significant changes in resource condition, data, or policy have become available since completion of this amendment. Therefore the decisions from the 2005 document have been brought forward in their entirety into the Approved RMP under the Wildland Fire Ecology header.

**Fire Management Strategies and Actions**

**FIRE-2**

The appropriate management response would be applied to all wildland fires, emphasizing firefighter and public safety and considering suppression costs, benefits, and values to be protected. The appropriate management response would be consistent with resource objectives, standards, and guidelines. Response to wildland fire would be based on ecological and social costs and benefits of the fire. The circumstances under which the fire occurs and the likely consequences to firefighter and public safety and welfare, natural and cultural resources, and values to be protected would dictate the appropriate management response to the fire. Fire Management Unit objectives (as included in the FMP) would further guide the appropriate management response.

**FIRE-3**

Wildland fire would be used to protect, maintain, and enhance resources and, when possible, would be allowed to function in its natural ecological role. Areas where wildland fire use is appropriate and not appropriate are identified in Table 1. The FMP would provide further operational guidance for wildland fire use.

#### **FIRE-4**

To reduce risks and to restore ecosystems, the following fuels management tools would be allowed: wildland fire use; prescribed fire; and mechanical, chemical, seeding, and biological actions. As conditions allow, the BLM would employ the least intrusive method over more intrusive methods. For example, wildland fire use is the preferred method of treatment. Where wildland fire use is not feasible, prescribed burning would be the preferred method. Where prescribed burning is not feasible, non-fire fuels treatments would become the preferred method of treatment.

#### **FIRE-5**

Work with partners in the WUI in wildland firefighting, hazardous fuels reduction, cooperative fire prevention education, and technical assistance. Unauthorized wildland fire ignitions would be prevented through coordination with partners and affected groups and individuals. The full range of prevention and mitigation activities would be used: personal contacts, mass media, education programs, and signage.

#### **FIRE-6**

The following Emergency Stabilization and Rehabilitation actions (after wildfire suppression) and restoration for planned actions may be used to reduce potential for soil erosion and invasive species spread: seeding or planting native and/or non-native species; applying approved herbicides; implementing soil stabilization measures (e.g., stabilization structures and mulches); protecting cultural resources; repairing or replacing facilities; fencing, herding, or removing livestock; and resting allotments. Specific actions could include brush/tree chopping; contour tree felling; silt catchments; waddles, straw, or fabric silt traps; mulching; drill seeding; aerial seeding; aerial seeding followed by mechanical seed covering (chaining, harrowing, or other mechanical means); planting seedlings; fence construction or rebuilding; road/trail maintenance or closures; cattle guards; road culvert installation or cleaning; water bars; sign installation and maintenance; herbicidal or mechanical weed treatments; weather station installation and maintenance; and repairing or rebuilding of minor facilities (e.g., cross-fencing, wildlife structures, recreational facilities).

#### **FIRE-7**

Monitoring actions would be undertaken to determine results from fire management decisions and actions. Monitoring results would be used in determining the need for further amendment or revisions.

#### **Wildland Fire Suppression Objectives and Management Actions**

#### **FIRE-8**

Fires would be suppressed at minimum cost, considering firefighter and public safety, benefits, and values to be protected, consistent with resource objectives.

#### **FIRE-9**

The BLM would provide a consistent, safe, and cost-effective fire management program through appropriate planning, staffing, training, equipment, and management.  
Limited Suppression and Wildland Fire Use Objectives and Actions

### **FIRE-10**

Wildland fire would be used to protect, maintain, and enhance resources and, when possible, would be allowed to function in its natural ecological role. However, due to resource conditions and proximity to values at risk, fire cannot be allowed to resume its natural role on public lands. The DWFC is that as lands are transitioned from a higher FRCC to a lower FRCC, the applicability of wildland fire use would increase. Therefore, fire managers would periodically assess the FRCC following changes in vegetation due to management actions and natural changes. This alternative authorizes wildland fire use as a tool, when appropriate, to reach the DWFC.

### **FIRE-11**

Wildland fire use would be an appropriate management response to naturally ignited wildland fires to accomplish specific resource management objectives in predefined designated areas. Operational management of wildland fire use is described in the Wildland Fire Implementation Plan. This alternative attempts to in general clarify the types of areas that are not suitable for wildland fire use while leaving other areas open for possible wildland fire use.

### **FIRE-12**

Although specific areas for wildland fires use would be identified in the FMPs, wildland fire use may be authorized for all areas, except when the following resources and values may be negatively impacted and there are no reasonable Resource Protection Measures to protect such resources and values:

- WUI areas
- Areas that are known to be highly susceptible to post-fire cheatgrass or invasive weed invasion
- Important terrestrial and aquatic habitats
- Non-fire adapted vegetation communities
- Sensitive cultural resources
- Areas of soil with high or very high erosion hazard
- Class I air-shed areas and particulate matter (less than 10 microns in diameter) (PM<sub>10</sub>) non-attainment areas
- Administrative sites
- Developed recreation sites
- Communication sites
- Oil, gas, and mining facilities
- Above-ground utility corridors
- High-use travel corridors, such as interstates, railroads, and/or highways.

### **FIRE-13**

The appropriate management response for areas containing these resources or values may be wildland fire use, but Resource Protection Measures would be necessary to protect these values if they are threatened. Additional protection actions may include employing strategies and tactics to avoid these values (e.g., using fire retardant to reduce fire spread in certain areas). In fire situations where these resources or values would not be impacted, wildland fire use may still not be employed due to other parameters (weather, personnel availability, etc.). In these situations,

the appropriate management response—from aggressive initial action to monitoring—would be used. The DWFC would be to restore fire to ecosystems when feasible; therefore, fuel treatments should focus on protecting the resources and values listed above so future wildland fire use actions could be more easily implemented.

#### **FIRE-14**

Current BLM regulations do not allow for funding of emergency stabilization or rehabilitation actions following wildland fire use. Utah BLM land managers often prefer to evaluate a fire after it occurs to determine if there is a need for any post-fire rehabilitation or stabilization. The inability to rehabilitate or stabilize burned areas following wildland fire use restricts some acres from being considered by BLM managers for wildland fire use.

#### **Prescribed Fire Objectives and Actions**

##### **FIRE-15**

All prescribed fire acres would be for a primary purpose of hazardous fuels reduction or community protection from fires. While these acres would likely also accomplish other resource objectives, this plan aims to directly analyze effects from fire management decisions.

Non-Fire Fuels Objectives and Actions

##### **FIRE-16**

All non-fire treatment acres would be for a primary purpose of hazardous fuels reduction or community protection from fires. While these acres would likely also accomplish other resource objectives, this plan aims to directly analyze effects from fire management decisions.

Criteria for Establishing Fire Management Priorities

##### **FIRE-17**

Protection of human life is the primary priority. Setting priorities among protecting human communities and community infrastructure, other property and improvements, and natural and cultural resources would be based on human health and safety, the values to be protected, and the costs of protection. Priorities for all aspects of fire management decisions and actions would be based on the following:

- WUI
- Maintain existing healthy ecosystems
- High priority sub-basin (Hydrologic Unit Code [HUC] 4) or watershed (HUC 5)
- Special status species
- Cultural resources and cultural landscapes.

#### **Resource Protection Measures for Fire Management Practices**

##### **FIRE-18**

Resource Protection Measures for fire management practices to protect natural or cultural resource values are described in Appendix 8 (obtained from the Utah Land Use Plan Amendment for Fire and Fuels Management Finding of No Significant Impact and Decision Record).

## **Cultural Resources (CUL)**

### **Goals and Objectives:**

- Identify, preserve, and protect significant cultural resources and ensure that they are available for appropriate uses by present and future generations (Federal Land Policy and Management Act [FLPMA] Sections 103(c) and 201(a) and (c); National Historic Preservation Act [NHPA] Section 110(a); and Archaeological Resources Protection Act, Section 14(a)).
- Seek to reduce imminent threats and resolve potential conflicts from natural or human-caused deterioration, or potential conflict with other resource uses (FLPMA Section 103(c); NHPA Sections 106 and 110(a)(2)) by ensuring that all authorizations for land use and resource use would comply with NHPA Section 106.
- Provide opportunities for scientific and educational uses of cultural resource sites. Interpretation of and education about previous human occupation and use of the area would be accomplished using appropriate sites and methods.
- Provide opportunities for traditional (Native American) uses of cultural resources and sites.
- Ensure compliance with Native American Grave Protection and Repatriation Act (NAGPRA).

### **Management Actions:**

#### **Protection of Cultural Resources**

##### **CUL-1**

Mitigate adverse impacts on cultural resources resulting from authorized surface disturbing activities.

##### **CUL-2**

Mitigate and/or preserve cultural and historic values on cultural properties eligible for National Register of Historic Places (NRHP) listing.

##### **CUL-3**

Meet responsibilities under the NHPA as addressed in the State Protocol Agreement Between the Utah State Director of BLM and the Utah State Historic Preservation Officer (SHPO), and the National Cultural Programmatic Agreement.

##### **CUL-4**

Complete cultural resources inventories prior to allowing permitted surface disturbing activities, excluding those areas and circumstances identified in BLM-M-8110.23, UT-BLM-H-8110 Section II.C, and UT-BLM-H-8110 Appendix 1.

##### **CUL-5**

Continue geographic and archaeological scientific inventories based on imminent threats from natural or human-caused deterioration, on potential conflict with other resource uses, and for compliance with NHPA Section 110.

**CUL-6**

Update the Class I cultural resources inventory every 10 years.

**CUL-7**

Provide opportunities for local interpretation (for local population) of cultural resources and public education (for general resource users).

**CUL-8**

Use proactive research, protection, and inventories involving universities, avocational and service groups, site stewards, tribes, and community outreach to gain a better understanding of cultural resources and preserve them for present and future study and use.

**CUL-9**

Consider land acquisitions from willing parties to preserve cultural resources, as appropriate (as identified in criteria #2 (LAR-19) for land tenure adjustments in the lands and realty decisions).

**CUL-10**

Preclude surface disturbing activities within ¼ mile or within the visual horizon, whichever is closer, of cultural sites where landscape association contributes to eligibility for the NRHP. Unevaluated portions of the setting would be managed as contributing until a cultural inventory and evaluation is completed and the setting is determined to be contributing or non-contributing.

**CUL-11**

Establish a comprehensive monitoring program emphasizing:

- Cultural sites that have been previously identified as being impacted (e.g., from vandalism, erosion, grazing, or other)
- Cultural sites identified on maps, brochures, or other media that bring the site into public awareness
- Sites that are known to be popular for public visitation (e.g., public use site)
- A representative sample of sites known to be prone to impacts from predictable sources (e.g., vandalism, recreation, grazing, or development).

**Management of Scientific, Traditional, Educational, Public, and Research Cultural Resource Values**

**CUL-12**

Allocate and manage cultural resource sites for scientific, public, conservation, traditional, and experimental uses and discharged from management categories described in BLM-M-8110.4 as follows:

- South Fork Indian Cave (42Ka1576), Helldive Canyon (42Ka1695), and Mansard (42Ka4427) would be placed in the Public Use category.
- Sites identified as Native American Traditional Cultural Properties would be placed in the Traditional Use category.
- All other sites considered eligible to the NRHP would be placed in the Most Appropriate Use category.

### **CUL-13**

Sites would be included in the Discharged from Management category if both of the following conditions are met and documented:

- The BLM and the SHPO have formally agreed that the site is not eligible for listing on the NRHP.
- The site has no value for other cultural uses (as described in BLM-M-8110.4).

### **CUL-14**

Allocations should be reevaluated and revised by site or area when circumstances change or when new data becomes available. Consult with the SHPO and Native American tribes as appropriate.

### **Proactive Cultural Resource Inventories**

#### **CUL-15**

Prioritize new field inventories (Class II or III) directed by NHPA Section 110 as follows:

- Recreation areas identified for public use (i.e., OHV open areas)
- 100 feet (30 meters) (depending on topography) on either side from the centerline of designated OHV routes
- Areas of special cultural designation (ACECs, National Register sites, etc.) that have not been fully inventoried
- Resources eligible for the NRHP at a national level of significance that have not been fully inventoried
- Road systems—100 feet (30 meters) (depending on topography) on either side from the centerline of road
- Areas lacking existing inventories (large areas with no inventory data)
- 5-mile vulnerability zones surrounding cities and towns
- Hiking/equestrian trails.

### **Areas and Values of Importance to Native American Tribes**

#### **CUL-16**

Identify and manage traditional cultural properties in coordination with Native American tribes.

#### **CUL-17**

Work with Native American tribes to ensure compliance with NAGPRA, when needed.

#### **CUL-18**

Work with Native American tribes to protect their rights including access to sacred sites and traditional cultural areas. Accommodate tribal access to sacred sites and traditional cultural properties when planning and implementing land uses. Prevent or mitigate physical damage or intrusions that might impede use of sacred sites and traditional cultural properties.

#### **CUL-19**

Establish and maintain agreements with all Native American tribes interested in specific projects or areas on which they wish to consult.

**CUL-20**

Allow Native American non-commercial traditional use of vegetation and forest and woodland products for the collection of herbs, medicines, traditional use items, or items necessary for traditional, religious, or ceremonial purposes, through permits.

## **Paleontological Resources (PAL)**

### **Goals and Objectives:**

- Protect scientifically significant paleontological resources.
- Protect paleontological resources with exceptional historic, cultural, or interpretive significance.
- Provide opportunities for scientific, educational, and recreational uses of paleontological resources.
- Cooperate with other federal, state, and local agencies in paleontological resources management activities.

### **Management Actions:**

#### **Protection of Paleontological Resources**

##### **PAL-1**

Monitor the highest priority scientifically significant paleontological sites for trend and condition.

##### **PAL-2**

Require on-the-ground paleontological inventories (field surveys) prior to permitting surface disturbing activities in paleontological Class I areas. Require paleontological assessments (formal analysis of existing data) prior to permitting surface disturbing activities in paleontological Class II areas.

##### **PAL-3**

Allow surface collection (as defined in BLM Manual 8270) of common invertebrate and botanical paleontological resources for personal (non-commercial) use without permits unless such resources are of critical scientific or recreational value and need to be protected, or where collection is incompatible with other resource protection.

##### **PAL-4**

Consult/coordinate with other local, state, and federal land agency paleontological resource specialists (if available) before undertaking significant ground disturbing activities in Class I areas to ensure protection of adjacent resources.

#### **Proactive Paleontological Inventories**

##### **PAL-5**

Conduct non-Section 106 proactive inventories intermittently as resources allow.

##### **PAL-6**

Prioritize paleontological resource inventories in the following areas (Map 24):

- High resource potential
- Medium resource potential
- Low resource potential.

**Management of Scientific, Traditional, Educational, Public, and Research Paleontological Resource Values**

**PAL-7**

Provide opportunities for local interpretation of paleontological resources.

**PAL-8**

When appropriate, target fossil sites with high scientific value for excavation and curation either by the BLM or by an outside academic or curatorial/research facility to protect them from theft, erosion, and/or vandalism. If excavation is not carried out within one field season, periodic monitoring should be conducted to document the integrity of the site until complete collection is accomplished.

**PAL-9**

Monitor high-significance (scientific or interpretive) sites with fossil resources that are not feasible or desirable to excavate or collect when possible to document their condition. Frequency of monitoring action for identified sites would be determined by the physical nature of the resource and potential threats.

**PAL-10**

Develop onsite or community-based interpretation for significant sites/specimens to foster an appreciation for the unique nature of the resource and to create opportunities for public access to such resources.

## **Visual Resources (VRM)**

### **Goals and Objectives:**

- Plan, modify, and implement resource management activities in a manner that would minimize impacts on visual resources.
- Manage the diversity of landscapes in the decision area for a desired level of change consistent with and giving consideration to other resource values and uses.

### **Management Actions:**

#### **Visual Resource Management Classes**

##### **VRM-1**

Designate the following acreages for the objectives defined for each VRM class (Map 6):

- Class I: 76,000 acres
- Class II: 99,600 acres
- Class III: 205,500 acres
- Class IV: 172,900 acres.

##### **VRM-2**

WUI areas would be in VRM Class III or IV.

#### **Visual Intrusions**

##### **VRM-3**

To the extent practicable, bring existing visual contrasts into VRM class conformance as the opportunity arises.

## **Non-WSA Lands with Wilderness Characteristics (WC)**

### **Goals and Objectives:**

Protect, preserve, and maintain wilderness characteristics (appearance of naturalness, outstanding opportunities for solitude, or primitive and unconfined recreation) of non-WSA lands with wilderness characteristics, as appropriate. Manage these primitive and backcountry landscapes for their undeveloped character and to provide opportunities for primitive recreational activities and experiences of solitude, as appropriate.

### **Management Actions:**

#### **Maintenance of Non-WSA Lands with Wilderness Characteristics**

##### **WC-1**

Manage the following non-WSA lands with wilderness characteristics (27,770 acres, Map 7) specifically to protect, preserve, and maintain their wilderness characteristics:

- East of Bryce (850 acres)
- Moquith Mountain (9,600 acres)
- Orderville Canyon (2,700 acres)
- Parunuweap Canyon (120 acres)
- Upper Kanab Creek (14,500 acres)

##### **WC-2**

Protect, preserve, and maintain wilderness characteristics through the following prescriptions:

- Designate as VRM Class II (Map 6).
- Close to commercial and personal-use forest and woodland product harvest (e.g., pole, post, firewood cutting, Christmas trees, seed collection, and wildings) except for incidental collection for onsite campfire use and administrative purposes.
- Limited to designated routes (Map 10).
- Avoid new ROWs (linear, communication sites, and wind and solar projects) (Map 11).
- Retain public lands in federal ownership
- Close to mineral material disposals (Map 16).
- Open to fluid mineral leasing with major constraints (NSO) (Map 14).

## **Drought and Natural Disasters (DND)**

### **Management Actions:**

#### **DND-1**

Coordinate appropriate management responses with affected parties when natural resources may be affected by drought, insects, diseases, or natural disasters. A variety of emergency or interim actions may be necessary to minimize land health degradations such as reduced forage allocations, reductions in the number of livestock and/or wildlife, increased mitigation measures to ensure reclamation, and limitations on energy field activities and recreational uses.

#### **DND-2**

Incorporate current Utah BLM Standards for Rangeland Health, as appropriate, across all resource programs. Management prescriptions in the form of constraints to use, terms and conditions, and stipulations may be needed to sustain rangeland health and viability. Management prescriptions will consider the following:

- Surface disturbing activities—These will be closely monitored to ensure compliance with authorizations and permit's conditions of approval or terms and conditions. Action minimizing new surface disturbance, allowed by regulations, and actions ensuring successful reclamation, will be emphasized. During periods of drought, the BLM could require additional actions such as changes to standard seed mix compositions, amount, and/or method of application. Additionally, methods to ensure successful revegetation following disturbance could include hydromulching, installation of drip irrigators, and fencing to exclude ungulate grazing/browsing.
- Livestock grazing—During periods of prolonged drought use will be allowed in both quantity and timing that will not result in a downward shift in rangeland health and/or production. The BLM will work cooperatively to effect a grazing strategy specific to a grazing permittee's individual grazing allotment(s) and make changes to the grazing authorizations, as appropriate, in accordance with the grazing regulations. In the case of drought, the BLM could temporarily close the range, or portions of it, to livestock grazing.
- Wildlife management—During periods of prolonged drought to the extent that vegetation monitoring indicate that habitat for wildlife ungulate populations cannot be sustained and overall animal health is compromised, the BLM will enter into discussions with the UDWR regarding herd numbers and overall management options to combat the effects of drought.
- Recreation—During periods of prolonged drought, the BLM, in cooperation with local and state fire management agencies, will limit campfires to established fire rings or fully contained fires. The last resort will be to close the public lands to campfires of any kind.
- OHVs—Off-highway/road vehicle use during periods of prolonged drought could be further restricted, or if site-specific conditions warrant, closure to OHVs could be implemented to minimize vehicle-induced injury or damage to rangeland and/or woodland resources and to minimize the potential of spark-caused fires.

## **Forestry and Woodland Products (FOR)**

### **Goals and Objectives:**

Provide a sustainable supply of a variety of commercial and non-commercial forest and woodland products.

### **Management Actions:**

#### **Commercial Timber Harvest**

##### **FOR-1**

Permit commercial timber harvest on a case-by-case basis for the purposes of promoting or sustaining forest health.

#### **Woodland Product Harvest**

##### **FOR-2**

Permit commercial and non-commercial harvest of green or dead pinyon and juniper woodland products (e.g., cedar posts, Christmas trees, fuel wood, and biomass utilization) areawide unless otherwise designated or stipulated. Permit harvest of other woodland species on a case-by-case basis.

##### **FOR-3**

Close WSAs and non-WSA lands with wilderness characteristics to woodland product harvest, except for incidental collection for onsite campfire use and administrative purposes.

##### **FOR-4**

Permit harvesting of woodland products in riparian areas in proper functioning condition on a case-by-case basis for the maintenance and/or improvement of riparian ecosystems.

##### **FOR-5**

Prohibit the removal of ponderosa pine for Christmas trees.

##### **FOR-6**

Develop a Forest Woodland Management Plan as required in the Utah Forest and Woodland Management Action Plan.

#### **Native American Use of Forestry and Woodland Products**

##### **FOR-7**

Allow Native American non-commercial traditional use of forest and woodland products for the collection of herbs, medicines, traditional use items, or items necessary for traditional, religious, or ceremonial purposes, through permits.

## **Livestock Grazing (GRA)**

Allotments in the decision area that are managed under the Escalante and Paria Management Framework Plans (MFP) will be addressed by the Rangeland Health EIS being prepared by Grand Staircase–Escalante National Monument (GSENM).

### **Goals and Objectives:**

- Maintain or restore healthy, sustainable rangeland ecosystems to meet BLM Utah’s Standards for Rangeland Health and to produce a wide range of public values such as wildlife habitat, livestock forage, recreation opportunities, clean water, and functional watersheds.
- Integrate livestock use and associated management practices with other multiple-use needs and objectives to maintain, protect, and improve rangeland health.
- Reduce or eliminate livestock-related rangeland resource problems on all allotments not meeting rangeland health standards while maintaining a production goal of livestock forage in the long term.

### **Management Actions:**

#### **GRA-1**

Manage livestock grazing allotments within the decision area as available for livestock grazing.

#### **Forage Allocation**

#### **GRA-2**

Use an interdisciplinary allotment evaluation process to provide specific guidance and actions for managing livestock grazing.

#### **GRA-3**

Allocate long-term increases and decreases in forage on a case-by-case basis based on an allotment-specific analysis through the NEPA process.

#### **GRA-4**

Allocate forage for livestock as noted in the grazing allotment forage allocation table (Appendix 14), except as noted below:

- Close the Water Canyon Allotment to livestock grazing for the life of the plan in order to protect the Fredonia City Culinary water supply.
- In order to have the RMP accurately reflect current management, combine the Lydia’s Canyon Allotment with the adjacent Lydia Allotment. The resulting Lydia Allotment would be available for livestock grazing with no additional livestock AUMs.
- Maintain existing forage allocations on the Lower North Fork Allotment.
- Maintain existing forage allocations on the Zion Park Allotment.
- In order to have the RMP accurately reflect current management, combine the Sawmill Allotment with the adjacent South Canyon Allotment. The resulting South

Canyon Allotment would be available for livestock grazing with no additional livestock AUMs.

**Grazing Management Practices**

**GRA-5**

Manage livestock grazing according to the Guidelines for Grazing Management on BLM Lands in Utah (BLM 1997a), implementing these guidelines when authorizing livestock grazing use and related activities.

**GRA-6**

Use livestock grazing to enhance ecosystem health and/or help accomplish resource objectives (e.g., noxious/invasive weed control and hazardous fuel reduction) on allotments where authorized by the authorized officer on a case-by-case basis.

**GRA-7**

Consider requests for changes in kind of livestock on a case-by-case basis (except as outlined below), and after review evaluate potential impacts on riparian and upland vegetation and other resource uses.

**GRA-8**

Allow motorized access to range improvements within WSAs according to the *Interim Management Policy for Lands Under Wilderness Review (IMP)*.

**GRA-9**

Design grazing systems and range improvements to achieve and maintain healthy rangelands.

**GRA-10**

Analyze conversions in kind of livestock (such as from sheep to cattle) in light of the Standards for Rangeland Health. Allow conversion where they would not be adverse to achieving a standard, or they would not be in conflict with other decisions in this plan.

**GRA-11**

Limit allocation of AUMs to the following kinds of livestock:

- Domestic cattle
- Horses
- Sheep
- Goats.

**GRA-12**

Do not authorize changes in kind of livestock to sheep or goats within 9 miles of Desert bighorn sheep habitat (same as decision in the Fish and Wildlife section).

**Allocation of Relinquished Preference for Livestock Forage**

**GRA-13**

A grazing permittee may voluntarily relinquish in writing all or a percentage of the grazing preference that is attached to the base property they own for any reason they may choose. This

action would not require consent or approval by the BLM or any other entity. The BLM would not be a party to or accept any contingencies or conditions associated with a relinquishment that would require future BLM action(s) such as discontinuing livestock grazing. Once the preference and associated permitted use has been relinquished in whole or in part, it would remain available for application for preference and a grazing permit. However, upon relinquishment, the BLM may determine through a site-specific evaluation and associated NEPA analysis that the public lands within a grazing allotment are better used for other purposes, such as recreation, wildlife, watershed for a culinary water source, disposal, etc. or a combination of these and/or other uses. Grazing may then be discontinued on the allotment through an amendment to the existing RMP or a new RMP effort. Any decision issued concerning discontinuance of livestock grazing on federal lands would not be permanent and would be subject to reconsideration during subsequent revision or amendment of the RMP. The evaluation and associated NEPA analysis may also determine that resource conditions are such that livestock grazing should be temporarily discontinued until site-specific resource objectives have been achieved. This evaluation and NEPA analysis would include a narrative with an evaluation time frame and process identified, indicating that once the objectives have been achieved the BLM would reconsider application(s) for grazing use.

**Mitigating Conflicts Between Livestock Grazing and Other Uses**

**GRA-14**

Give emphasis to changes in grazing management practices (e.g., changing season of use and fencing) before reducing AUMs on allotments to resolve conflicts with other uses.

**GRA-15**

Suspend authorization of AUMs in areas of intensive surface disturbance (such as surface coal mining) until rehabilitation is complete.

**Range Treatments for Livestock Grazing**

**GRA-16**

Complete land treatments to maintain or provide additional AUMs needed to meet the demand for livestock forage and divide the AUMs proportionally among all operators within the affected allotments.

**GRA-17**

Prioritize treatments on the following allotments (Map 5):

- South Canyon
- Sethy's Canyon
- Sandy Creek
- Sanford Bench
- Sugar Knoll
- Spring Hollow
- Circleville Cove
- Kane Spring (non-WSA portion)
- Buck Knoll
- Spencer Bench

- Clay Flat
- Harris Flat
- Three Mile
- Limestone Canyon
- Spry
- Chris Spring
- Big Flat
- Limekiln Creek
- Poverty Flat (non-WSA portion)
- Roller Mill
- Oak Spring
- Yellowjacket (non-WSA portion)
- Dog Valley
- Bald Knoll
- Alton Cove
- Coop Creek
- Areas that are not achieving Standards for Rangeland Health.

## **Recreation (REC)**

OHV and other transportation decisions are primarily included in the transportation management decisions.

### **Goals and Objectives:**

- Provide recreational activities in a variety of physical, social, and administrative settings, from primitive to near-urban, that allow visitors to have desired recreational experiences and enjoy the resulting benefits.
- Provide for public health and safety through interpretation, facility development, and visitor management.
- Manage and protect recreational areas and resources containing significant scenic, natural, and cultural values as well as areas with scientific importance.
- Provide opportunities for visitor use and enjoyment of the area, consistent with resource capabilities and mandated resource requirements; provide for visitor education and interpretation of the recreational opportunities within the decision area.
- Maintain important recreational values and sites in federal ownership to ensure a continued diversity of recreation activities, experiences, and benefits.

### **Management Actions:**

#### **Special and Extensive Recreation Management Areas**

##### **REC-1**

Identify the following Recreation Management Areas (RMA) (Map 8):

- Kanab Community SRMA (community) (33,100 acres)
- Paria SRMA (destination) (21,200 acres)
- Moquith Mountain SRMA (community) (15,000 acres)
- Orderville Canyon SRMA (undeveloped) (1,950 acres)
- North Fork Virgin River SRMA (undeveloped) (1,050 acres)
- Escalante SRMA (community) (22,800 acres)
- Kanab Field Office Extensive Recreation Management Area (ERMA) (458,900 acres).

##### **REC-2**

Recreation management direction for each SRMA is outlined in Appendix 4. This includes direction for the following recreation management components:

- Recreation Niche
- Recreation Management Objectives
- Primary Activities
- Experiences
- Benefits
- Setting Character Conditions.

**REC-3**

Develop SRMA management plans that identify site-specific development needs to achieve recreation benefits, experiences, and objectives.

**REC-4**

Portions of the decision area not identified as an SRMA will be identified as an ERMA. ERMAs will receive only custodial management (which addresses only activity opportunities) of visitor health and safety, user conflict, and resource protection issues with no activity-level planning. Therefore, actions within ERMAs will generally be implemented directly from LUP decisions.

**Kanab Community SRMA:**

Market Strategy: Community

**REC-5**

OHV RMZ (18,500 acres)

- Recreation Niche:
  - Close-to-town OHV travel in an exceptionally scenic setting with a variety of trails for different skill levels.
- Primary Activities:
  - Driving OHVs, viewing scenery and wildlife, photography, spending time with friends and family, and participating in and/or viewing competitive/organized events.

Required Management:

- OHV:
  - Minimal designated routes to access RMZ and provide a variety of OHV opportunities
- VRM:
  - Class III
- Minerals:
  - Open to oil and gas leasing subject to major constraints (NSO)
- Facilities:
  - Provide support facilities for recreation experience.

**REC-6**

Non-Motorized RMZ (14,600 acres)

- Recreation Niche:
  - Town-accessible hiking and equestrian trail network offering outstanding views and varied terrain.

- Primary Activities:
  - Hiking, rock-scrambling, viewing scenery and wildlife, photography, equestrian, spending time with friends and family, and participating in and/or viewing competitive/organized events.

Required Management (outside the Moquith Mountain non-WSA lands with wilderness characteristics area) (10,700 acres):

- OHV:
  - Limit to designated routes to access trail heads
- VRM:
  - Class II
- Minerals:
  - Open to oil and gas leasing subject to major constraints (NSO)
- Facilities:
  - Provide support facilities for recreation experience.

Required Management (inside the Moquith Mountain non-WSA lands with wilderness characteristics area) (3,900 acres):

- Designate as VRM Class II.
- Close to commercial and personal-use forest and woodland product harvest (e.g., pole, post, firewood cutting, Christmas trees, seed collection, and wildings) except for incidental collection for onsite campfire use and administrative purposes.
- Limited to designated routes.
- Avoid new ROWs (linear, communication sites, and wind and solar projects).
- Retain public lands in federal ownership
- Close to mineral material disposals.
- Open to fluid mineral leasing with major constraints (NSO).

**Paria SRMA:**

Market Strategy: Destination

**REC-7**

Canyon RMZ (1,100 acres)

- Recreation Niche:
  - World-class wilderness trekking adventure viewing deeply entrenched slickrock canyon and associated slot canyon features.
- Primary Activities:
  - Hiking and scrambling, backpacking, canyoneering, outdoor photography, camping, viewing scenic vistas, viewing cultural sites, and wilderness exploration.

Required Management:

- Manage according to the management actions for the Paria Canyon-Vermilion Cliffs Wilderness

**REC-8**

Uplands RMZ (20,100 acres)

- Recreation Niche:
  - Unique, world-class primitive and backcountry adventure recreation viewing unique upland geologic features.
- Primary Activities:
  - Hiking and scrambling, outdoor photography, viewing wildlife and scenic vistas, wilderness exploration, equestrian, and camping.

Required Management:

- Manage according to the management actions for the Paria Canyon-Vermilion Cliffs Wilderness

**Moquith Mountain SRMA**

Market Strategy: Community

**REC-9**

Dunes RMZ (1,000 acres)

- Recreation Niche:
  - Unique, scenic, and expansive sand dunes OHV opportunities.
- Primary Activities:
  - Driving among sand dunes, camping along dune fringes, photography, and spending time with friends and family.

Required Management (the Dunes RMZ is entirely within the Moquith Mountain WSA):

- According to IMP
- OHV:
  - Open beyond vegetated and conservation areas. All vehicles on the dunes are required to stay at least 10 feet from vegetation.
- VRM:
  - Class I.
- Facilities:
  - Provide support facilities for recreation experience.

Dry Lakebed :

- No dumping of grey water or black water from RV units.
- Firepans required for all open fires, and firewood must be packed in from outside the SRMA.
- No digging of holes or pits.
- No construction of fire-rings.
- All trash and fire residue must be packed out and not left in the SRMA.

**REC-10:**

Non-Dunes Wooded RMZ (14,000 acres)

- Recreation Niche:
  - Scenic and extensive OHV trail network accessing vistas, overlooks, flora and fauna, and cultural sites.
- Primary Activities:
  - Driving OHVs; viewing flora/fauna, geology, and cultural sites; hiking; equestrian; camping; hunting; photography; and spending time with friends and family.

Required Management (the Non-Dunes Wooded RMZ is partially inside the Moquith Mountain WSA) (10,600 acres):

- According to IMP
- OHV:
  - Limit to designated routes to access trail heads
- VRM:
  - Class I.
- Facilities:
  - Provide support facilities for recreation experience.

Required Management (the Non-Dunes Wooded RMZ is partially inside the Cottonwood Canyon ACEC) (3,700 acres):

- OHV:
  - Limit to designated routes to access trail heads
- VRM:
  - Class II.
- Minerals:
  - Open to oil and gas leasing subject to major constraints (NSO), recommend withdrawing from mineral entry, close to mineral material disposals
- Facilities:
  - Provide support facilities for recreation experience.

Required Management (for the remainder of the Non-Dunes Wooded RMZ):

- OHV:
  - Limit to designated routes to access trail heads
- VRM:
  - Class III
- Minerals:
  - Open to oil and gas leasing subject to major constraints (NSO)
- Facilities:
  - Provide support facilities for recreation experience.

### **Ponderosa Grove Campground**

- No dumping of grey water or black water from RV units.
- No fires outside of established campsite fire grates.
- No digging of holes or pits.

### **Orderville Canyon SRMA**

Market Strategy: Undeveloped

### **REC-11**

(1,950 acres)

- Recreation Niche:
  - Spectacular, primitive riparian canyon travel with abundant geologic formations and diverse flora and fauna.
- Primary Activities:
  - Canyoneering, hiking, backpacking, hunting, camping, outdoor photography, viewing nature and wildlife, equestrian, and studying geology.

Required Management (the Orderville Canyon SRMA is entirely within the Orderville Canyon WSA and 500 acres of the SRMA are within the Orderville Canyon suitable “wild” segment):

- According to IMP
- OHV:
  - Limit to designated routes except closed to OHV use within the 500 acres of the Orderville Canyon suitable “wild” segment
- VRM:
  - Class I
- Facilities:
  - Provide support facilities for recreation experience.

### **North Fork Virgin River SRMA**

Market Strategy: Undeveloped

#### **REC-12**

(1,050 acres)

- Recreation Niche:
  - Spectacular, primitive riparian canyon travel with abundant geologic formations and diverse flora and fauna.
- Primary Activities:
  - Canyoneering, hiking, backpacking, hunting, camping, outdoor photography, viewing nature and wildlife, equestrian, and studying geology.

Required Management (the North Fork Virgin River SRMA is entirely within the North Fork Virgin River WSA and 200 acres of the SRMA are within the North Fork Virgin River suitable “wild” segment):

- According to IMP
- OHV:
  - Limit to designated routes except closed to OHV use within the 200 acres of the North Fork Virgin River suitable “wild” segment
- VRM:
  - Class I
- Facilities:
  - Provide support facilities for recreation experience.

### **Escalante SRMA**

Market Strategy: Community

#### **REC-13**

(22,800 acres)

- Recreation Niche:
  - Town-accessible OHV touring, mountain biking, and hiking/equestrian trail networks offering outstanding views and varied terrain.
- Primary Activities:
  - OHV touring, mountain biking, hiking, rock-scrambling, viewing scenery and wildlife, photography, equestrian, spending time with friends and family, and participating in and/or viewing competitive/organized events.

Required Management:

- OHV:
  - Limit to designated routes

- VRM:
  - Class III
- Minerals:
  - Open to leasing subject to standard terms and conditions
- Facilities:
  - Provide support facilities for recreation experience.

**Kanab Field Office ERMA**

**REC-14**

(458,900 acres)

- Primary Activities:
  - OHV touring; hiking; picnicking; backpacking; hunting; fishing; camping; equestrian; outdoor photography; viewing geologic features, nature, and wildlife; and participating in and/or viewing competitive/organized events.

Required Management:

- Facilities:
  - Provide support facilities for recreation experience.

**General Recreation Management**

**REC-15**

Develop recreation sites and facilities needed to accommodate users, facilitate recreational uses of public lands, and protect resources.

**REC-16**

Implement the necessary safety measures to protect visitors in the Coral Pink Sand Dunes/Moquith Mountain area through coordination between the BLM and the State of Utah. Emphasis would be placed on minimizing interaction between motorized and non-motorized uses on the sand dunes, as well as enforcement of existing state and federal laws and policies. The existing OHV trails adjacent to Hancock Road would be closed. BLM and State Park personnel would continue to cooperate with local authorities on law enforcement matters.

**REC-17**

Regulate rock climbing within 300 feet of cultural sites. Climbing routes that impact cultural resource sites will generally not be allowed, and climbing routes designed to access cultural resource sites will not be allowed unless under permit for scientific investigation.

**REC-18**

No person or persons should occupy one area on BLM lands within the decision area for longer than 14 consecutive days in any 28-day period; however, extensions beyond the 14-day length of stay could be authorized for permitted uses on a case-by-case basis. Any site on public land within 30 air miles constitutes the same area for the purpose of this management decision.

**REC-19**

Close areas to rock climbing within the distance and time restrictions identified in the management of raptor habitat decisions.

**REC-20**

Use the minimum necessary signage to provide for public safety and information or to control unauthorized use.

**REC-21**

Design facilities to be compatible with the local landscapes and recreation experience.

**REC-22**

Management responses to unacceptable resource and/or social conditions will range from least restrictive methods (e.g., information and education) to most restrictive (e.g., visitor limits, supplemental rules, or restrictions). Where feasible, the least restrictive methods will be the first priority. (Recognize that various levels of regulations and limits are necessary. Restrictions and limitations on public uses should be as small as possible without compromising the primary goal.) Use on-the-ground presence as a tool to protect public lands.

**REC-23**

Developed recreation sites will be recommended for withdrawal from mineral entry, closed to mineral material disposal, and open to oil and gas leasing subject to major constraints (NSO).

**REC-24**

Developed recreation sites will be fenced to exclude grazing use.

**REC-25**

Identify areas for rock crawling where impacts could be minimized or eliminated and where such use would be compatible with other resource goals and objectives.

**Dispersed Camping**

**REC-26**

Allow dispersed camping throughout the decision area without permit, unless specified in the plan.

**REC-27**

Limit vehicle parking for dispersed camping within 150 feet of designated routes.

**Interpretation and Environmental Education**

**REC-28**

Provide information regarding recreation opportunities, interpretation of natural and human history, and specific rules and regulations pertaining to use of public lands to visitors.

**REC-29**

Provide education and outreach programs such as Tread Lightly or Leave No Trace.

**REC-30**

Provide information on the area's cultural and natural resources through outreach programs (e.g., organizations, schools, and partnerships) to build emotional, intellectual, and recreational ties with the area.

**REC-31**

Public information will be provided only for those cultural sites designated for public use.

**Heritage Tourism**

**REC-32**

Coordinate with local communities and other groups to foster heritage tourism throughout the decision area.

**Big Game Retrieval**

**REC-33**

Allow use of non-motorized wheel carriers to retrieve game kills outside of WSAs.

**Acquisition of Easements**

**REC-34**

Acquire legal access to areas of high recreation interest from willing parties.

**Night Skies and Soundscapes**

**REC-35**

Impacts on night sky would be considered and mitigated through the application of specific mitigation measures (e.g., down lighting and low-level lighting) identified in activity-level planning and NEPA review. See also Lands and Realty restrictions on the use of strobe lights.

**REC-36**

Impacts to soundscapes around national parks would be considered and mitigated through the application of specific mitigation measures identified in activity-level planning and NEPA-level review.

**Special Recreation Permits**

**REC-37**

Issue SRPs after evaluation of the various factors including the following:

- Use conforms to the recreation goals and objectives outlined in the Resource Management Plan
- Nature of proposed event or activity (i.e., commercial versus competitive)
- Size (acreage) and sensitivity of land and resources affected (ACEC, WSA, VRM)
- Compatibility with other uses, activities, and visitors in that area
- Proposed number of participants and group size
- Associated vehicle and equipment
- Time (daily, seasonally) and duration of proposed use
- Potential social impacts (crowding, group encounters, conflicting activities, and/or experiences)

- Specific resources impacted (e.g., wildlife, cultural, paleontology, visual, riparian, soil, air, and water)
- Rehabilitation and monitoring needs and feasibility
- Support needs (people, equipment, supplies, vehicles)
- Safety issues.

**REC-38**

Vending will be authorized in conjunction with organized events when it directly supports the recreation experience and is appropriate to support the experience and setting as outlined in the Resource Management Plan and when the vending is necessary to support resource protection or appropriate recreation use.

**REC-39**

Vending along scenic byways and backways would be coordinated with the Scenic Byway coordination committees and local government and highway authorities.

**REC-40**

In protected and restricted MSO habitat, limit SRP group size to no more than 12 according to recovery plan.

**REC-41**

Prohibit OHV or mountain bike tours in the following areas:

- Where compliance with the Utah Riparian Policy would not be achieved
- The loop within Moquith Mountain WSA
- The Elephant Cove Way within Parunuweap WSA.

**REC-42**

Limit camping associated with SRPs to areas beyond 200 feet of riparian areas unless specific campsites are required during permitting. Approval of these specific campsites would be considered on a case-by-case basis.

**REC-43**

Group size would be limited to 12 people total (including tour guides) in the following areas:

- Wetlands/riparian zones
- WSAs
- Designated critical habitat for special status species.

**REC-44**

Group size would be limited to 25 people total in the remainder of the decision area, with permits for groups of more than 25 people being considered on a case-by-case basis in areas where resources would not be damaged.

**REC-45**

SRPs will be subject to the following restrictions unless specifically authorized:

- No collection of natural resources (not including firewood for personal onsite use).
- No SRP activities will be authorized in bald eagle winter roost areas from November 15 through March 15 during critical roosting hours (from 1 hour after sunset to 9 a.m.).
- If surveys reveal the presence of nesting Southwestern willow flycatchers, authorize no SRP activities in these locations between May 15 and June 30.
- No Greater sage-grouse lek areas will be advertised by SRP holders or the BLM.
- Implement seasonal/area closures during Greater sage-grouse breeding (March 1 to April 30) and/or wintering (November 1 to February 28) seasons if BLM biologists determine that breeding or wintering is being impacted by SRP activities.

## **Transportation (TRC), (TRR), (TRV)**

### **Goals and Objectives:**

- Maintain access, where needed, to meet public and administrative needs including acquiring or maintaining necessary access across non-federal land.
- Compatible traditional, current, and future use of the land would be sustained by establishing a route system that contributes to protection of sensitive resources, accommodates a variety of uses, and minimizes user conflicts.
- Public access, resource management, and regulatory needs would be considered through transportation planning, incorporating consideration of access needs and the effects of and interaction among all forms of travel, including motorized, mechanized, and non-motorized/mechanized travel.
- Coordinate OHV management with adjacent BLM field offices and other agencies where possible.
- Provide opportunities for OHV use on public lands.

## **Transportation-Travel Management Area Categories, (TRC)**

### **Management Actions:**

#### **OHV Area Designations**

##### **TRC-1**

Management of motorized access would balance protection of resources while providing for resource use needs. Area designations would be as follows (Map 9):

- Open to cross-country OHV use: 1,000 acres
- Limited to designated routes: 528,000 acres
- Closed to OHV use: 25,000 acres.
- See Recreation section for specific management of OHV use in SRMAs.

#### **Areas Open for Cross-Country OHV Use**

##### **TRC-2**

Designate the following managed open areas:

- Moquith Mountain SRMA: Dunes RMZ beyond vegetated and conservation areas
- DD Hollow topsoil pit.

#### **Spatial Limitations**

##### **TRC-3**

Management of OHV use in areas not designated as open or closed would be limited to designated routes (528,000 acres) (Map 9).

### **Seasonal Limitations**

#### **TRC-4**

Designated routes on the north side of Pugh Canyon are closed annually to motorized use between February 1 and August 31 if a breeding pair of raptors is using the area (to protect the reproductive success of a breeding pair of raptors). If no nesting behavior is initiated prior to June 1, a BLM authorized officer could open the route to motorized use. During the remainder of the year OHV use will be limited to designated routes.

### **Areas Closed to OHV Use**

#### **TRC-5**

Designate the following areas as closed to OHV use:

- Paria SRMA—both RMZs
- Designated wilderness (by Congressional designation)
- In and through islands of vegetation in Welsh’s milkweed designated critical habitat (790 acres)
- Suitable “wild” river corridors.

### **Transportation-Travel Management OHV Route Identification, (TRR)**

#### **Management Actions:**

#### **TRR-1**

Manage inventoried routes as follows (Map 10):

- Open to motorized vehicle use: 1,402 miles
- Limited (closed seasonally) to motorized vehicle use: 2 miles
- Closed to motorized vehicle use: 76 miles.

#### **TRR-2**

Consideration of route and trail modifications (new or existing) will be conducted on a case-by-case basis in accordance with resource/use objectives and after appropriate NEPA review and analysis (Appendix 7).

### **Transportation System Management**

#### **TRR-3**

Where the authorized officer determines that OHVs are causing or would cause considerable adverse impacts, the authorized officer shall close or restrict such areas. Local highway authorities would be consulted as appropriate. The public would be notified.

#### **TRR-4**

BLM could impose limitations on the types of vehicles allowed on specific designated routes if monitoring indicates that a particular type of vehicle is causing disturbance to the soil, wildlife habitat, cultural or vegetative resources, especially by off-road travel in an area that is limited to designated routes.

### **TRR-5**

Where routes remain available for motorized use within WSAs, such use could continue on a conditional basis. Use of the existing routes in the WSAs (“ways” when located within WSAs) could continue as long as the use of these routes does not impair wilderness suitability, as provided by the IMP (BLM 1995). If Congress designates the area as wilderness, the routes will be closed. In the interim, if use and/or non-compliance are found through monitoring efforts to impair the area’s suitability for wilderness designation, BLM would take further action to limit use of the routes or close them. The continued use of these routes, therefore, is based on user compliance and non-impairment of wilderness values.

## **Transportation-Travel Management, (TRV)**

### **Management Actions:**

#### **TRV-1**

Coordinate transportation planning with Kane and Garfield counties.

#### **TRV-2**

The BLM would continue to repair, maintain, and rehabilitate routes to maintain existing route conditions. Route modifications (new facilities or expansion of existing facilities) would be determined on a case-by-case basis in accordance with resource/use objectives and after appropriate NEPA review and analysis.

#### **TRV-3**

Pursue maintenance agreements with highway authorities in the decision area.

#### **TRV-4**

BLM, in preparing its RMP designations and its implementation-level travel management plans, is following policy and regulation authority found at 43 CFR 8340, 43 CFR 8364, and 43 CFR 9268.

#### **TRV-5**

As per the State of Utah v. Andrus, October 1, 1979 (Cotter Decision), BLM would grant the State of Utah reasonable access to state lands for economic purposes on a case-by-case basis.

## **Lands and Realty (LAR)**

### **Goals and Objectives:**

- Make public lands available for community growth and expansion needs, recreation, and public purposes as well as other infrastructure needs.
- Strive to increase and diversify our Nation's sources of traditional and alternative energy resources, improve our energy transportation network, and ensure sound environmental management in support of minerals and energy development, as required by the President's National Energy Policy and the Energy Policy Act of 2005.
- Retain in public ownership public lands that enhance multiple-use management, allow access to public lands, or contain sensitive or rare resources.
- Acquire lands or interests in lands to complement existing resource values and uses.
- Consider for disposal lands or interests in lands that are difficult and uneconomic to manage as part of the public lands, are no longer needed for a federal purpose, or where disposal would serve important public objectives.
- Resolve any outstanding State Grant entitlements (quantity grants, in-lieu selections).
- Make public lands available for ROWs, permits, and leases. The suitability for these land actions would be judged on a case-by-case basis.
- Consider energy and utility corridors to focus placement of new major ROWs for energy and transportation systems.

### **Management Actions:**

#### **Communication Sites**

##### **LAR-1**

Prepare communication site plans for all existing communication sites before any new types of uses or new facilities would be authorized on the site. Site plans would be prepared for all new communication sites before any development of the site(s) would be authorized.

##### **LAR-2**

Evaluations for the siting and construction of communications towers will take into account potential impacts on migratory birds. Measures to avoid and minimize impacts would be considered during design, including avoiding known bird migration corridors, eliminating guy wires, restricting height of towers to less than 200 feet, and installing minimum lighting with use of white strobe lights rather than red (strobe or non-strobe) lights. The addition of new communications devices on existing towers will be considered where it is practical and does not present a safety or operational risk.

##### **LAR-3**

Require a feasibility study and site plan for new communications locations.

**Management of ROWs and ROW Corridors**

**LAR-4**

Exclude new ROWs (including communication sites) (75,700 acres) in the following areas (Map 11):

- WSAs
- Wilderness areas
- Suitable WSR corridors with a tentative classification of “wild” or “scenic.”

**LAR-5**

Avoid new ROWs (51,570 acres) in the following areas (Map 11):

- The five non-WSA lands with wilderness characteristics managed to protect, preserve, and maintain those characteristics (27,700 acres)
- Within ½ mile of active, suitable (currently inactive) Utah prairie dog habitats and within potential reintroduction sites.

**LAR-6**

Preference would be to locate ROW developments in common (within existing ROWs/disturbance areas).

**LAR-7**

Consider burying new and reconstructed utility lines (including powerlines up to 24 kilovolts [kV]) unless:

- Visual quality objectives can be met without burying
- Geologic conditions make burying infeasible
- Burying would produce greater long-term site disturbance.

**LAR-8**

New and reconstructed powerlines must meet non-electrocution standards for raptors. If electrocution or line strike issues develop with existing powerlines, corrective actions to meet these non-electrocution standards would be taken.

**LAR-9**

Construct powerlines greater than 230 kV using non-reflective wire. Towers would be constructed using non-reflective material. Powerlines would not be high-lined unless no other location exists.

**LAR-10**

Linear crossings, such as pipelines, utilities, or roads, across riparian areas and/or ephemeral channels would be considered on a case-by-case basis to protect the above areas. Surface disturbing activities would be avoided on unstable areas, such as landslides, and slumps.

**Areas Recommended for Withdrawal**

**LAR-11**

Request the cancellation of the Classification and Multiple Use Act of 1964 classifications segregating the following lands from all forms of appropriation including mineral location:

- Township 42 S, Range 7 W, Sec. 4, Lots 5, 6, 11, and 12 (140.05 acres)
- Township 43 S, Range 7 W, Sec. 7, NE1/4 (160 acres)
- Township 43 S, Range 7 W, Sec. 14, SE1/4 (160 acres)
- Township 43 S, Range 7 W, Sec. 17, NW1/4, SE1/4SE1/4 (200 acres)
- Township 43 S, Range 8 W, Sec. 13, NW1/4NW1/4 (40 acres)
- Township 43 S, Range 8 W, Sec. 14, NE1/4NE1/4 (40 acres).

The values for which these lands were classified would be reviewed and if they still warrant protection, specific protective withdrawals under FLPMA Section 204 would be obtained prior to the cancellation of the existing classifications.

**Existing Withdrawals**

**LAR-12**

Review existing withdrawals on a case-by-case basis. Determine whether the use is consistent with the intent of the withdrawal and whether the withdrawal should be continued, modified, revoked, or terminated.

**LAR-13**

Manage land becoming unencumbered by withdrawals in a manner consistent with adjacent or comparable public land within the planning area.

**New Withdrawals**

**LAR-14**

Limit the size of proposed withdrawals to the minimum acreage consistent with the demonstrated need.

**LAR-15**

In addition to the 24,591 acres withdrawn, recommend the following areas (9,500 acres) for withdrawal from mineral entry (Map 12):

- Cottonwood Canyon ACEC
- Developed recreation sites
- Suitable “wild” river corridors
- Suitable “scenic” river corridors
- Relict vegetation areas (Diana’s Throne and Elephant Butte).

**Existing Classifications and Segregations**

**LAR-16**

Review existing classifications and segregations on a case-by-case basis to determine whether the classification or segregation is appropriate and should be continued, modified, or terminated. A notice of termination and opening order would be published to notify the public when and to what extent the land will be opened, consistent with planning decisions. Land on which a

classification or segregation has been terminated would be managed in a manner consistent with adjacent or comparable public land within the planning area.

**Areas and Lands Available for Land Tenure Adjustment**

**LAR-17**

Public lands, in order to be considered for any form of land tenure adjustment (including exchanges, in-lieu selections, desert land entries, R&PP, easement acquisitions, etc.), except for FLPMA Section 203 sales, must meet one or more of the following criteria:

- Is in the public interest; accommodates the needs of state, local, or private entities, including for the economy and community growth and expansion; and is in accordance with other land use goals, objectives, and planning decisions
- Results in net gain of important and manageable resource values on public lands such as crucial wildlife habitat, significant cultural sites, high-value recreation areas, high-quality riparian areas, live water, special status species habitat, or areas key to maintenance of productive ecosystems
- Ensures the accessibility of public lands in areas where access is needed and cannot otherwise be obtained
- Is essential to allow effective management of public lands in areas where consolidation of ownership is necessary to meet resource management objectives
- Results in the acquisition of lands that serve a national priority as identified in national policy directives.

**LAR-18**

Habitat for listed threatened, endangered, and candidate species would be retained in federal ownership unless land tenure adjustments would result in a net increase of habitat. All actions involving listed species or their habitat would result in the proper consultation with USFWS. Land tenure adjustments may be considered with the State of Utah and others after consultation with and concurrence by USFWS.

**LAR-19**

Retain non-WSA lands with wilderness characteristics in federal ownership where identified to protect, preserve and maintain their wilderness characteristics.

**LAR-20**

Lands with mining claims could be considered for disposal if the following apply: (1) the new surface owner is the mining claimant, or (2) the new surface owner agrees to accept the surface with the claim encumbrance.

**LAR-21**

Approximately 6,000 acres of public land would be available for FLPMA Section 203 sales with NEPA compliance and consistent with other decisions in this RMP (Map 13; Appendix 5).

**LAR-22**

Manage oil and gas with NSO stipulations on R&PP leases. If these sites are no longer required, they would be managed as are adjacent lands.

**LAR-23**

Give land exchanges with the State of Utah priority consideration to resolve inholdings issues.

**LAR-24**

As per the Cotter Decision, reasonable access to state lands would be authorized for economic purposes.

**Alternative Energy Resource Development (Wind Energy and Solar Energy Development)**

**LAR-25**

Adopt programmatic policies and BMPs in the Wind Energy Development Program identified in Record of Decision for Implementation of a *Wind Energy Development Program and Associated Land Use Plan Amendments (BLM 2005e)*.

**LAR-26**

Consider proposals for ROWs for wind and solar energy development throughout the decision area with the following exceptions:

- Designated wilderness
- WSAs
- ACECs
- Suitable WSR corridors.

**Management of Filming Permits**

**LAR-27**

Filming may be authorized throughout the decision area after site-specific NEPA analysis is completed.

## **Minerals and Energy (MIN)**

### **Goals and Objectives:**

- Provide opportunities for mineral exploration, development, and reclamation under the mining and mineral leasing laws (e.g., coal mining, alabaster gypsum), subject to legal requirements to protect other resource values.
- Provide salable and free-use mineral materials to meet local demand through the case-by-case issuance of permits and sale contracts.
- Identify lands available for mineral leasing and development.

### **Management Actions:**

#### **Oil and Gas Leasing**

##### **MIN-1**

Close public lands or federal mineral estate within incorporated municipalities to mineral leasing in accordance with the Mineral Leasing Act (30 United States Code [U.S.C.] 181 and 43 CFR 3100.0-3(a)(2)(iii) and 3100.0-3(b)(2)(ii)).

##### **MIN-2**

Exceptions, waivers, or modifications to stipulations on oil and gas leases and other surface disturbing activities may be considered on a case-by-case basis in accordance with Appendix 3 guidelines.

##### **MIN-3**

Manage the following sites as open to leasing subject to major constraints (NSO):

- Cemeteries
- Landfills, existing and closed
- Lands managed under R&PP Act leases
- Developed recreation sites
- Airports
- Federal facilities.

##### **MIN-4**

Manage fluid mineral leases as shown on Map 14:

- Open to leasing subject to standard terms and conditions: 95,400 acres
- Open to leasing subject to moderate constraints (seasonal and CSU): 296,200 acres
- Open to leasing subject to major constraints (NSO): 83,400 acres
- Closed to leasing: 79,000 acres.

##### **MIN-5**

In accordance with an UDEQ-DAQ letter dated June 6, 2008, (see Appendix 10) requesting implementation of interim nitrogen oxide control measures for compressor engines; BLM will

require the following as a Lease Stipulation and a Condition of Approval for Applications for Permit to Drill:

- All new and replacement internal combustion oil and gas field engines of less than or equal to 300 design-rated horsepower must not emit more than 2 gms of NO<sub>x</sub> per horsepower-hour. This requirement does not apply to oil and gas field engines of less than or equal to 40 design-rated horsepower.
- All new and replacement internal combustion oil and gas field engines of greater than 300 design rated horsepower must not emit more than 1.0 gms of NO<sub>x</sub> per horsepower-hour.

**Geophysical Exploration**

**MIN-6**

Limit vehicular use for necessary tasks, such as geophysical exploration including project survey and layout, to OHV designations. Exceptions may be granted by permit on a case-by-case basis.

**MIN-7**

Allow geophysical operations consistent with existing regulations and policies and subject to constraints in areas with special designations (WSA, ACEC, WSR segments tentatively classified as “wild” or “scenic”) as determined through site-specific NEPA analysis.

**Other Leasable Minerals**

**MIN-8**

Lease geothermal resources consistent with oil and gas leasing stipulations and consistent with other resource objectives.

**Areas Unsuitable for Surface Coal Mining**

**MIN-9**

Approximately 35,538 acres (Map 15) are determined to be unsuitable for surface mining and surface operations incident to an underground mine as stated in 43 CFR 3400.0-5(mm) based on the 20 criteria identified in Appendix 6.

**MIN-10**

Additional areas could be found unsuitable based on site-specific analysis (Appendix 6).

**MIN-11**

Incorporate erosion control stipulations in mining plans for surface mining disturbance as per Surface Mining Control Reclamation Act regulations.

**Locatable Minerals**

**MIN-12**

Allow location, exploration, and development of locatable minerals on public lands except where withdrawn. Evaluate operations for exploration and development in the context of its requirement to prevent unnecessary and undue degradation of other resources.

**MIN-13**

In addition to the 24,591 acres withdrawn, recommend withdrawing the following areas (9,500 acres) from mineral entry (Map 12):

- Cottonwood Canyon ACEC
- Developed recreation sites
- Suitable “wild” river corridors
- Suitable “scenic” river corridors
- Relict vegetation areas (Diana’s Throne and Elephant Butte).

**Mineral Materials**

**MIN-14**

Allow mineral material disposals on a case-by-case basis subject to site-specific environmental analysis excluding the following areas (105,000 acres) (Map 16):

- Cottonwood ACEC
- Relict Vegetation (Diana’s Throne and Elephant Butte)
- WSAs
- Non-WSA lands with wilderness characteristics
- Paria Canyon–Vermilion Cliffs Wilderness area (closed to mineral material disposals by congressional designation)
- Suitable “wild” river corridors
- Suitable “scenic” river corridors
- Developed recreation sites.

**MIN-15**

Incorporate erosion control and rehabilitation stipulations into mining plans.

## **Areas of Critical Environmental Concern (ACEC)**

### **Goals and Objectives:**

Designate and manage as ACECs areas where special management attention is required to protect and prevent irreparable damage to important historic, cultural, or scenic values; protect fish and wildlife resources or other natural system or processes; or protect life and safety from natural hazards.

### **Management Actions:**

#### **ACEC-1**

Include stipulations for permitted actions within the designated ACEC to ensure relevant and important values, resources, processes, systems, and hazards are protected or managed for.

#### **Cottonwood Canyon ACEC Outside of Moquith Mountain WSA**

##### **ACEC-2**

Designate and manage the 3,800 acres as the Cottonwood Canyon ACEC (Map 17). Manage the relevant and important values as follows:

##### Scenic:

- Designate as VRM Class II
- Limit OHV use to designated routes
- Open to oil and gas leasing subject to major constraints (NSO)
- Recommend withdrawing from mineral entry
- Close to mineral material disposals.

##### Cultural:

- Monitor specific sites on a regular basis
- Retain all lands and interests in land in federal ownership
- Work with the School and Institutional Trust Lands Administration (SITLA) to acquire state inholdings.

##### Hazard/Safety/Public Welfare:

- Close the Water Canyon Allotment (48 AUMs) to livestock grazing in order to protect the Fredonia City Culinary water supply for the life of the plan.

#### **Cottonwood Canyon ACEC Inside Moquith Mountain WSA**

##### **ACEC-3**

Approximately 2,400 acres (63 percent) of the Cottonwood Canyon ACEC are inside the Moquith Mountain WSA. The relevant and important values in this portion of the ACEC would be managed according to the IMP and the following management prescriptions:

Scenic:

- Designate as VRM Class I
- Limit OHV use to designated routes
- Recommend withdrawing from mineral entry

Cultural:

- For purposes of Cultural Resources: Monitor specific sites on a regular basis
- Retain all lands and interests in land in federal ownership
- Work with the School and Institutional Trust Lands Administration (SITLA) to acquire state inholdings.

Hazard/Safety/Public Welfare:

- Close the Water Canyon Allotment (48 AUMs) to livestock grazing in order to protect the Fredonia City Culinary water supply for the life of the plan.

## **Wild and Scenic Rivers (WSR)**

### **Goals and Objectives:**

Preserve suitable rivers, or segments of rivers, and their immediate environments in their free-flowing condition for the protection of their outstandingly remarkable values (ORV) and for the benefit and enjoyment of present and future generations, giving consideration to other resource values and uses.

### **Management Actions:**

#### **Wild and Scenic Rivers Act Recommendations**

##### **WSR-1**

Management to protect the river segments would be provided in the following ways:

- Free-flowing values: The free-flowing characteristics of river segments would not be modified to allow stream impoundments, diversions, channelization, and/or rip-rapping to the extent the BLM is authorized under law.
- Outstandingly Remarkable Values: Each river segment would be managed to protect identified ORVs and, to the extent practicable, such values would be enhanced.
- Tentative Classification: Management and development of the river and its corridor would not be modified to the degree that its tentative classification would be affected. A river segment's tentative classification would not be changed due to modification from "wild" to "scenic" or from "scenic" to "recreational."

##### **WSR-2**

Protective management would apply to BLM lands within the river corridor, which does not exceed "more than 320 acres of land per mile measured from the ordinary high water mark on both sides of the river" (16 U.S.C. 1274(b)). The corridors may vary on either side of the river and be narrower or wider to protect ORVs, but the total corridor widths may not exceed 320 acres (half of a mile or 2,640 feet wide) per river mile.

##### **WSR-3**

Protective interim management of suitable rivers would not involve assertion of federal reserved water rights.

##### **WSR-4**

Manage rivers determined suitable for congressional designation into the National Wild and Scenic Rivers System (NWSRS) in a manner that would protect their ORVs, free-flowing nature, and tentative classification, in accordance with protective management for the river corridors.

##### **WSR-5**

Six eligible river segment corridors (Map 18) would be determined suitable for WSR designation (5,530 acres/30 miles), with the tentative classifications of "wild" (4,570 acres/25 miles) or "scenic" (960 acres/5 miles).

**North Fork Virgin River—Segment 48-49**

**WSR-6**

Suitable—Wild

Manage the portion of the North Fork Virgin River (segment 48-49) suitable “wild” river segment inside the North Fork WSA to protect the tentative classification and ORVs through the following specific management prescriptions (within ¼ mile of each side of the river or the viewshed from the river, whichever is less):

- According to the IMP
- VRM: Class I
- Recommend for withdrawal from locatable mineral entry
- Motorized Travel: Closed to OHV use
- ROW exclusion area.

Manage the portion of the North Fork Virgin River (segment 48-49) suitable “wild” river segment outside the WSA to protect the tentative classification and ORVs through the following specific management prescriptions (within ¼ mile of each side of the river or the viewshed from the river, whichever is less):

- VRM: Class I
- Minerals: Close to oil and gas leasing, recommend for withdrawal from locatable mineral entry, and close to mineral material disposal
- Motorized Travel: Close to OHV use
- ROW exclusion area.

**East Fork Virgin River—Segment 37-40a**

**WSR-7**

Suitable—Scenic

Manage the East Fork Virgin River (segment 37-40a) suitable “scenic” river segment inside the Parunuweap WSA to protect the tentative classification and ORVs through the following specific management prescriptions (within ¼ mile of each side of the river or the viewshed from the river, whichever is less):

- According to the IMP
- VRM: Class I
- Recommend for withdrawal from locatable mineral entry
- Motorized Travel: Limit to designated routes
- ROW exclusion area.

**East Fork Virgin River—Segment 40a-41**

**WSR-8**

Suitable—Wild

Manage the East Fork Virgin River (segment 40a-41) suitable “wild” river segment inside the Parunuweap WSA to protect the tentative classification and ORVs through the following specific

management prescriptions (within ¼ mile of each side of the river or the viewshed from the river, whichever is less):

- According to the IMP
- VRM: Class I
- Recommend for withdrawal from locatable mineral entry
- Motorized Travel: Close to OHV use
- ROW exclusion area.

**Orderville Gulch (Esplin Gulch)—Segment 44-45**

**WSR-9**

Suitable—Wild

Manage the portion of the Orderville Gulch (Esplin Gulch) (segment 44-45) suitable “wild” river segment inside the Orderville Canyon WSA to protect the tentative classification and ORVs through the following specific management prescriptions (within ¼ mile of each side of the river or the viewshed from the river, whichever is less):

- According to the IMP
- VRM: Class I
- Recommend for withdrawal from locatable mineral entry
- Motorized Travel: Close to OHV use
- ROW exclusion area.

Manage the portion of the Orderville Gulch (Esplin Gulch) (segment 44-45) suitable “wild” river segment outside the Orderville Canyon WSA to protect the tentative classification and ORVs through the following specific management prescriptions (within ¼ mile of each side of the river or the viewshed from the river, whichever is less):

- VRM: Class I
- Minerals: Close to oil and gas leasing, recommend for withdrawal from locatable mineral entry, and close to mineral material disposal
- Motorized Travel: Close to OHV use
- ROW exclusion area.

**Meadow Creek/Mineral Gulch—Segment 33-35, 35-38**

**WSR-10**

Suitable—Wild

Manage the portion of the Meadow Creek/Mineral Gulch (segment 33-35, 35-38) suitable “wild” river segment inside the Parunuweap WSA to protect the tentative classification and ORVs through the following specific management prescriptions (within ¼ mile of each side of the river or the viewshed from the river, whichever is less):

- According to the IMP
- VRM: Class I
- Recommend for withdrawal from locatable mineral entry

- Motorized Travel: Close to OHV use
- ROW exclusion area.

Manage the portion of the Meadow Creek/Mineral Gulch (segment 33-35, 35-38) suitable “wild” river segment outside the Parunuweap WSA to protect the tentative classification and ORVs through the following specific management prescriptions (within ¼ mile of each side of the river or the viewshed from the river, whichever is less):

- VRM: Class I
- Minerals: Close to oil and gas leasing, recommend for withdrawal from locatable mineral entry, and close to mineral material disposal
- Motorized Travel: Close to OHV use
- ROW exclusion area.

**Paria River—Segment 68-69**

**WSR-11**

Suitable—Wild

ORVs in the Paria River would be preserved through the following management approach (from the Final Arizona Statewide Wild and Scenic Rivers Study Report/Record of Decision [BLM 1997b], which determined eligibility for the Paria River and is carried forward in this document):

- Developed campgrounds, interpretive centers, or administrative headquarters within the river corridor would be prohibited. Simple comfort and convenience facilities would be permitted.
- New electric transmission lines, natural gas lines, water lines, and other ROWs would be prohibited.
- Woodcutting would not be permitted except where needed to clear trails, for visitor safety, or to control fire.
- Livestock grazing would be managed to protect ORVs within the area.
- No new flood control dams, levees, or other water works would be permitted.
- Hydroelectric power facilities would be prohibited.
- All water supply dams and major diversions would be prohibited.
- Construction of new routes for motorized travel would be prohibited.

**Management of Suitable Rivers**

**WSR-12**

Allow other activities within the suitable river segment corridors on a case-by-case basis as long as their ORVs, free-flowing nature, and tentative classification would be protected. See BLM Manual-8351, Section 5, for implementation guidance.

**Coordination with State Agencies, Federal Agencies, and Tribal Governments**

**WSR-13**

BLM would work with the State of Utah, local and tribal governments, and other federal agencies, in a state-wide study, to reach consensus regarding recommendations to Congress for the inclusion of rivers in the NWSRS. Besides applying consistent criteria across agency

jurisdictions, the joint study would avoid piecemealing of river segments in logical watershed units in the state. The study would evaluate, in detail, the possible benefits and effects of designation on the local and state economies, agricultural and industrial operations and interests, outdoor recreation, natural resources (including the outstandingly remarkable values for which the river was deemed suitable), water rights, water quality, water resource planning, and access to and across river corridors within, and upstream and downstream from the proposed segments(s). Actual designation of river segments would only occur through congressional action or as a result of Secretarial decision at the request of the Governor in accordance with provisions of the Wild and Scenic Rivers Act (the Act). BLM will work with the state, local and tribal governments, and the agencies involved to coordinate its decision-making on wild and scenic river issues and to achieve consistency wherever possible.

#### **WSR-14**

BLM recognizes that water resources on most river and stream segments within the State of Utah are already fully allocated. Before stream segments that have been recommended as suitable under this Approved RMP are recommended to Congress for designation, BLM will continue to work with affected local, state, federal, and tribal partners to identify in-stream flows necessary to meet critical resource needs, including values related to the subject segments. Such quantifications would be included in any recommendation for designation. BLM would then seek to jointly promote innovative strategies, community-based planning, and voluntary agreements with water users, under State law, to address those needs.

#### **WSR-15**

Should designations occur on any river segment as a result of Secretarial or congressional action, existing rights, privileges, and contracts would be protected. Under Section 12 of the Act, termination of such rights, privileges, and contracts may happen only with the consent of the affected non-federal party. A determination by the BLM of eligibility and suitability for the inclusion of rivers on public lands to the NWSRS does not create new water rights for the BLM. Federal reserved water rights for new components of the NWSRS are established at the discretion of Congress. If water is reserved by Congress when a river component is added to the NWSRS, it would come from water that is not appropriated at the time of designation, in the amount necessary to protect features which led to the river's inclusion into the system. BLM's intent would be to leave existing water rights undisturbed and to recognize the lawful rights of private, municipal, and state entities to manage water resources under state law to meet the needs of the community. Federal law, including Section 13 of the Act and the McCarren Amendment (43 U.S.C. 666), recognizes state jurisdiction over water allocation in designated streams. Thus, it is BLM's position that existing water rights, including flows apportioned to the State of Utah interstate agreements and compacts, including the Upper Colorado River Compact, and developments of such rights would not be affected by designation or the creation of the possible federal reserved water right. BLM would seek to work with upstream and downstream water users and applicable agencies to ensure that water flows are maintained at a level sufficient to sustain the values for which affected river segments were designated.

## **Wilderness (DW)**

### **Goals and Objectives:**

- Manage for the long-term protection and preservation of the area's wilderness character under a principle of non-degradation. The area's natural condition; opportunities for solitude; opportunities for primitive and unconfined types of recreation; and any ecological, geological, or other features of scientific, educational, scenic, or historical value present would be managed so that they remain unimpaired.
- Manage designated wilderness for the use and enjoyment of visitors in a manner that leaves the area unimpaired for future use and enjoyment as wilderness. The wilderness resource would be a dominant factor in all management decisions where a choice must be made between preservation of wilderness character and visitor use.
- Manage designated wilderness using the minimum tools, equipment, and/or structures necessary to accomplish the objective successfully, safely, and economically. The chosen tools, equipment, or structures would be the ones that least degrade wilderness values temporarily or permanently. Management would seek to preserve spontaneity of use and as much freedom from regulation as possible.
- Manage non-conforming but accepted uses permitted by the Wilderness Act and subsequent laws in a manner that would prevent unnecessary or undue degradation of the area's wilderness character. Non-conforming uses are the exception rather than the rule; therefore, emphasis would be placed on maintaining wilderness character.

### **Management Actions:**

#### **Management of the Paria Canyon–Vermilion Cliffs Wilderness**

##### **DW-1**

Manage the Paria Canyon–Vermilion Cliffs Wilderness cooperatively with Arizona BLM.

##### **DW-2**

Implement the Paria Canyon–Vermilion Cliffs Wilderness Management Plan.

##### **DW-3**

The wilderness character of the Paria Canyon–Vermilion Cliffs Wilderness would be protected and enhanced.

##### **DW-4**

Maintain the current group size and visitor use limits required for use in Paria Canyon, subject to adaptive management decisions deemed necessary through monitoring and evaluation of resources and social conditions.

##### **DW-5**

Restore lands within the wilderness area where ecological integrity is outside the range of natural variability and where compatible with wilderness objectives.

**DW-6**

Restore ecological functions and structure in wilderness using the minimum tool requirement standard for BLM wilderness areas and the best mix of chemical, biological, or mechanical means with fire and natural processes.

**DW-7**

For fire and fuels management, the use of earth-moving equipment must be authorized by the Field Office Manager.

**DW-8**

Fire management actions will rely on the most effective methods of suppression that are least damaging to wilderness values, other resources, and the environment while requiring the least expenditure of public funds.

**DW-9**

A resource advisor will be consulted when fire occurs in the wilderness.

**DW-10**

Use natural processes to restore areas of preexisting human imprints. Where proactive restoration of wilderness conditions is desirable, require the minimum requirement standards; plans to address restoration of preexisting human impacts may be required.

**DW-11**

Ensure that any change in the landscape is very low.

**DW-12**

Manage to protect or restore the natural quiet and natural soundscapes of the area.

**DW-13**

Prohibit all motorized vehicles, motorized equipment, aircraft landing, and other forms of mechanical transport (including mountain bikes and wheeled game carriers). Exceptions may be authorized per the Wilderness Act Section 4(d) when it is:

- Necessary to meet minimum requirements for the administration of the area
- Required in emergencies involving the health and safety of persons within the areas
- For the exercise of a private existing right or other special provision.

## **Wilderness Study Areas (WSA)**

### **Goals and Objectives:**

Manage WSAs in a manner that does not impair their suitability for designation as wilderness. Temporary uses that create no new surface disturbance nor involve permanent placement of structures may be allowed in WSAs on a case-by-case basis.

### **Management Actions:**

#### **WSA Management**

##### **WSA-1**

Planning decisions in this RMP will not affect the existence of or recommendations on WSAs identified as a result of inventory conducted under Section 603 of FLPMA and awaiting action by Congress. Further, although the formal Section 603 wilderness review process was determined to have expired on October 21, 1993, BLM may and will continue to inventory public lands for resource values including wilderness characteristics on lands that have not been reviewed, or where new information is provided that shows additional inventory is necessary. However, additional Wilderness Study Areas will not be designated through this planning process.

##### **WSA-2**

Manage all WSAs according to the IMP (BLM Manual Handbook H-8550-1) until legislation is enacted to either designate the areas as wilderness or release them for uses other than wilderness.

##### **WSA-3**

Only Congress can release a WSA from wilderness consideration. Should any WSA, in whole or in part, be released from wilderness consideration, such released lands will be managed in accordance with the goals, objectives, and management prescriptions established in this RMP, unless otherwise specified by Congress in its releasing legislation. BLM will examine proposals in the released areas on a case-by-case basis but will defer all actions that are inconsistent with RMP goals, objectives, and prescriptions until it completes a land use plan amendment. Because any released lands will continue to be managed consistent with the prescriptions identified in this plan unless and until the plan is amended, no separate analysis is required to address impacts to released lands.

##### **WSA-4**

Where routes remain available for motorized use within WSAs, such use could continue on a conditional basis. Use of the existing routes in the WSAs (“ways” when located within WSAs) could continue as long as the use of these routes does not impair wilderness suitability, as provided by the IMP (BLM 1995). If Congress designates the area as wilderness, the routes will be closed. In the interim, if use and/or non-compliance are found through monitoring efforts to impair the area’s suitability for wilderness designation, BLM would take further action to limit use of the routes or close them. The continued use of these routes, therefore, is based on user compliance and non-impairment of wilderness values.

**WSA-5**

Designate WSAs as VRM Class I.

**OHV Use in WSAs**

**WSA-6**

Manage OHV area designation in WSAs as shown in Table 2 and on Map 9.

**Table 2. OHV Area Designations in WSAs**

<b>WSA</b>	<b>OHV Designation</b>	<b>Acres</b>
Canaan Mountain	Limited	4,300
Acquired Land Managed as Part of the Canaan Mountain WSA	Limited	600
Moquith Mountain	Closed	400
	Limited	13,800
	Open	1,000
North Fork Virgin River	Closed	200
	Limited	850
Orderville Canyon	Closed	500
	Limited	1,450
Parunuweap Canyon	Closed	6,200
	Limited	24,600

**WSA-7**

Designate 25.0 miles of inventoried ways in WSAs (Moquith Mountain–8.5 miles; Parunuweap Canyon–15.9 miles; Orderville Canyon–0.6 miles) for OHV use (Map 10) .

## **Other Designations**

### **Goals and Objectives:**

- Coordinate management of National Scenic Byways, Utah Scenic Byways, and Utah Scenic Backways with other agencies and BLM offices, as appropriate.
- Consider impacts on other designations when evaluating all proposed projects.
- Promote the preservation and appreciation of the Old Spanish National Historical Trail for the enjoyment of the American people.

### **Management Actions:**

#### **National and State Scenic Byways and State Scenic Backways**

##### **OD-1**

Cooperate with state and local authorities to implement the purposes of designation.

#### **Old Spanish National Historic Trail**

##### **OD-2**

Work with the BLM and National Park Service (NPS) planning team in the development of a comprehensive management plan for the National Historic Trail.

##### **OD-3**

Prepare an Activity (Trail) Plan for the Old Spanish National Historic Trail to identify specific on-the-ground actions that would be taken to implement the goals and objectives of the Trail.

#### **Highway 89/20 Segment, Garfield County**

##### **OD-4**

Work in cooperation with Utah State Parks and Recreation, Garfield County, Old Spanish Trail Association, and the NPS on interpretive and recreation opportunities for this segment:

- Provide interpretive information at appropriate locations (e.g., kiosks, road junctions, Garfield County line)
- Retain public lands in federal ownership
- Limit OHV use to designated routes
- Manage for VRM objectives (VRM Class II in Circleville Canyon and VRM Class III and Class IV elsewhere).

#### **Highway 89 Segment, Kane County**

##### **OD-5**

Work in cooperation with Utah State Parks and Recreation, Kane County, Old Spanish Trail Association, and the NPS on interpretive and recreation opportunities for this segment:

Provide interpretive information at appropriate locations (e.g., kiosks, road pullouts, Kane County line).

## **Public Safety (HAZ)**

### **Goals and Objectives:**

- The BLM would strive to ensure that human health and safety concerns on public lands remain a major priority.
- Hazardous or potentially hazardous sites and situations, including hazardous materials, hazardous or solid wastes, abandoned mine sites, abandoned well sites, and other potential hazards on public lands would be mitigated or eliminated.
- The potential for intentional or accidental releases of hazardous materials or wastes and solid wastes onto public lands would be minimized or eliminated.

### **Management Actions:**

#### **Management of Abandoned Mine Lands**

##### **HAZ-1**

In conformance with the BLM's long-term strategies and national policies regarding Abandoned Mine Lands (AML), this RMP recognizes the need to work with our partners toward identifying and addressing physical safety and environmental hazards at all AML sites on public lands. To accomplish this long-term goal, the criteria discussed in the following paragraphs would be established to assist in determining priorities for site and area mitigation and reclamation.

##### **HAZ-2**

The criteria that would be used to establish physical safety hazard program priorities are:

- The AML physical safety program's highest priority would be cleaning up those AML sites where (a) a death or injury has occurred; (b) the site is situated on or in immediate proximity to developed recreation sites and areas with high visitor use; and (c) upon formal risk assessment, a high or extremely high risk level is indicated.
- AML would be factored into future recreation management area designations, land use planning assessments, and all applicable use authorizations.
- The site is listed or is eligible for listing in the Abandoned Mine Site Cleanup Module of the Protection and Response Information System.
- AML hazards should be, to the extent practicable, mitigated or remediated on the ground during site development.

##### **HAZ-3**

The criteria that would be used to establish water quality-based AML program priorities are:

- The site has identified the watershed as a priority based on (a) one or more water laws or regulations, (b) threat to public health or safety, and (c) threat to the environment.
- The project reflects a collaborative effort with other land management agencies.
- The site is listed or is eligible for listing in the Abandoned Mine Site Cleanup Module of the Protection and Response Information System.
- The project would be funded by contributions from collaborating agencies.

**HAZ-4**

Maintain the State Multi-Year Work Plan and update as needed to reflect current policies for identifying program physical safety and water quality AML site priorities for reclamation and remediation.

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## GLOSSARY

**Acquisition.** The Bureau of Land Management (BLM) acquires land, easements, and other real property rights when it is in the public interest and consistent with approved land use plans (LUP). The BLM's land acquisition program is designed to (1) improve management of natural resources through consolidation of federal, state, and private lands; (2) increase recreational opportunities, preserve open space, and/or ensure accessibility of public lands; (3) secure key property necessary to protect habitat for threatened and endangered species, promote high-quality riparian areas, and promote biological diversity; (4) preserve archaeological and historical resources; and (5) implement specific acquisitions authorized by Acts of Congress.

**Activity Plan.** A type of implementation plan (see Implementation Plan); an activity plan usually describes multiple projects and applies best management practices to meet LUP objectives. Examples of activity plans include interdisciplinary management plans, habitat management plans, recreation area management plans, and allotment management plans (from H-1601-1, BLM Land Use Planning Handbook).

**Active Use.** Livestock grazing term meaning the current authorized use, including livestock grazing and conservation use. Active use may constitute a portion, or all, of permitted use. Active use does not include temporary non-use or suspended use of forage within all or a portion of an allotment (43 Code of Federal Regulations [CFR] 4100.0-5).

**Actual Use.** Livestock grazing term meaning where, how many, what kind or class of livestock, and how long livestock graze on an allotment or on a portion or pasture of an allotment (43 CFR 4100.0-5).

**Administrative Use.** Official use related to management and resources of the public lands by federal, state, or local governments or non-official use sanctioned by an appropriate authorization instrument, such as right-of-way (ROW), permit, lease, or maintenance agreement.

**Administrative Route.** Routes that are limited to administrative (official or authorized) users only.

**Administrative Purposes.** Administrative use functions involving regular maintenance or operation of facilities or programs.

**Air Quality.** A measure of the health-related and visual characteristics of the air, often derived from quantitative measurements of the concentrations of specific injurious or contaminating substances. Refers to standards for various classes of land as designated by the Air Pollution Control Act of 1955; Clean Air Act of 1963, as amended; and Air Quality Act of 1967.

**All-Terrain Vehicle (ATV).** A wheeled or tracked vehicle, other than a snowmobile or work vehicle, designed primarily for recreational use or for the transportation of property or equipment exclusively on undeveloped roads, trails, marshland, open country, or other unprepared surfaces (from BLM National Management Strategy for OHV Use on Public Lands).

**Allotment.** An area of land designated and managed for livestock grazing (43 CFR 4100.0-5) (from H-4180-1, BLM Standards for Rangeland Health).

**Allotment Management Plan (AMP).** A document prepared in consultation with the grazing lessees or permittees involved that applies to livestock operations on the public lands and that (1) prescribes the manner in and extent to which livestock operations will be conducted to meet the multiple-use, sustained-yield, economic, and other needs and objectives as determined for the lands by the Secretary concerned; (2) describes the type, location, ownership, and general specifications for the range improvements to be installed and maintained on the lands to meet the livestock grazing and other objectives of land management; and (3) contains such other provisions relating to livestock grazing and other objectives found by the Secretary concerned to be consistent with the provisions of this Act and other applicable law (from Federal Land Policy and Management Act [FLPMA], Title 43, Chapter 35, Subchapter I 1702(k)).

**Animal Unit Month (AUM).** A standardized measurement of the amount of forage necessary for the sustenance of one cow unit or its equivalent for 1 month (about 800 pounds of usable air-dried forage).

**Appropriate Management Response (AMR).** The response to a wildland fire based on an evaluation of risks to firefighter and public safety; the circumstances under which the fire occurs, including weather and fuel conditions; natural and cultural resource management objectives; protection priorities; and values to be protected. The evaluation also must include an analysis of the context of the specific fire within the overall local area, geographic area, or national wildland fire situation.

**Areas of Critical Environmental Concern (ACEC).** Areas within the public lands in which special management attention is required (when such areas are developed or used or where no development is required) to protect and prevent irreparable damage to important historic, cultural, or scenic values; fish and wildlife resources; or other natural systems or processes or to protect life and safety from natural hazards (from FLPMA, Title 43, Chapter 35, Subchapter I 1702(a)).

**Assessment.** The act of evaluating and interpreting data and information for a defined purpose (from H-1601-1, BLM Land Use Planning Handbook).

**Authorized Officer.** A federal employee who has the delegated authority to make a specific decision.

**Avoidance Area.** Areas with sensitive resources and/or values where ROWs and Section 302 permits, leases, and easements would be strongly discouraged. Authorizations made in avoidance areas would have to be compatible with the purpose for which the area was designated and not be otherwise feasible on lands outside the avoidance area.

**Backcountry.** A recreation setting classification characterized by a naturally appearing landscape with human modifications not readily noticeable, small areas with limited evidence of surface or vegetative disturbances, and little or no evidence of primitive roads or motorized use. Small, isolated structures may be present. Contains some primitive trails made of native materials (e.g., log bridges and carved wooden signs).

**Backcountry Byways.** Vehicle routes that traverse scenic corridors using secondary or backcountry road systems. National backcountry byways are designated by the type of road and vehicle needed to travel the byway.

**Benefits-Based Recreation.** A management framework, philosophy, or approach to providing recreation and trail resources, facilities, and programs that focuses on identifying the economic, environmental, and social benefits to target recreation users. This management approach builds on existing activity, facility, or demographic group orientations but focuses on the outcomes or changes in the target groups.

**Best Management Practices (BMP).** A suite of techniques that guide or may be applied to management actions to aid in achieving desired outcomes. BMPs are often developed in conjunction with LUPs, but they are not considered an LUP decision unless the LUP specifies that they are mandatory. The practices may be updated or modified without a plan amendment if they are not mandatory (from H-1601-1, BLM Land Use Planning Handbook).

**Big Game.** Indigenous ungulate wildlife species that are hunted (e.g., elk, deer, bison, bighorn sheep, and pronghorn).

**Biological Assessment (BA).** The document prepared by or under the direction of the BLM concerning listed and proposed species and designated and proposed critical habitat that may be present in the action area. The document contains the BLM's determination of potential effects of the action on such species and habitat. BAs are required for formal consultations and conferences on "major construction projects." They are recommended for all formal consultations and formal conferences and many informal consultations in which a written evaluation of the effects of an action on listed or proposed species and on designated or proposed critical habitat is needed (from M-6840, Special Status Species Manual).

**Biological Opinion (BO).** The document that includes (1) the U.S. Fish and Wildlife Service's (USFWS) and/or National Marine Fisheries Service's (NMFS) opinion as to whether or not a federal action is likely to jeopardize the continued existence of listed species or to result in the destruction or adverse modification of designated critical habitat; (2) a summary of information on which the opinion is based; and (3) a detailed discussion of the effects of the action on listed species or designated critical habitat. Depending on the determination of jeopardy or non-jeopardy, the BO may contain reasonable and prudent alternatives, a statement of anticipated take of listed animals, and conservation recommendations for listed plants (from M-6840, Special Status Species Manual).

**Candidate Species.** Taxa for which the USFWS has sufficient information on their status and threats to support proposing the species for listing as endangered or threatened under the Endangered Species Act (ESA) but for which issuance of a proposed rule is currently precluded by higher priority listing actions. Separate lists for plants, vertebrate animals, and invertebrate animals are published periodically in the Federal Register (from M-6840, Special Status Species Manual).

**Casual Use.** Any short-term non-commercial activity ordinarily resulting in no or negligible disturbance of the public lands, resources, or improvements. Casual use generally includes

surveying, marking routes, and data collection. It also includes collecting of geochemical, rock, soil, or mineral specimens using hand tools, hand panning, and non-motorized sluicing. It also generally includes use of metal detectors, gold spears, and other battery-operated devices for sensing the presence of minerals, and hand and battery-operated dry-washers. Casual use excludes the use of mechanized earth-moving equipment, truck-mounted drilling equipment, suction dredges, and motorized vehicles in areas designated as closed to off-highway vehicles (OHV), chemicals, or explosives. It also excludes occupancy or operations in which the cumulative effects of the activities result in more than negligible disturbance.

**Cherry-Stemming.** Drawing the boundaries of a special management area to exclude the acreage and disturbance of a road/way.

**Class of Livestock.** Livestock grazing term meaning the ages and/or sex groups of a kind of livestock (43 CFR 4100.0-5).

**Closed.** Generally denotes that an area is unavailable for a particular use or uses; refers to specific definitions found in law, regulations, or policy guidance for application to individual programs. For example, 43 CFR 8340.0-5 sets forth the specific meaning of “closed” as it relates to OHV use, and 43 CFR 8364 defines “closed” as it relates to closure and restriction orders (from H-1601-1, BLM Land Use Planning Handbook).

**Code of Federal Regulations (CFR).** The official codification of the current, general, and permanent regulations of Federal Government activities.

**Collaboration.** A cooperative process in which interested parties, often with widely varied interests, work together to seek solutions with broad support for managing public and other lands (from H-1601-1, BLM Land Use Planning Handbook).

**Collaborative Partnerships or Collaborative Stewardship.** Refers to people working together, sharing knowledge and resources, to achieve desired outcomes for public lands and communities within statutory and regulatory frameworks (from H-1601-1, BLM Land Use Planning Handbook).

**Conformance.** Means that a proposed action shall be specifically provided for in the LUP or, if not specifically mentioned, shall be clearly consistent with the goals, objectives, or standards of the approved LUP (from H-1601-1, BLM Land Use Planning Handbook).

**Conservation Agreement.** A formal written document agreed to by USFWS and/or NMFS and another federal agency, state agency, local government, or the private sector to achieve the conservation of candidate species or other special status species through voluntary cooperation. It documents the specific actions and responsibilities for which each party agrees to be accountable. The objective of a conservation agreement is to reduce threats to a special status species or its habitat. An effective conservation agreement may lower species’ listing priority or eliminate the need for listing (from M6840, Special Status Species Manual).

**Conservation Strategy.** A strategy outlining current activities or threats that are contributing to the decline of a species, along with the actions or strategies needed to reverse or eliminate such a decline or threats. Conservation strategies are generally developed for species of plants and

animals that are designated as BLM-sensitive species or that USFWS or National Oceanic and Atmospheric Administration (NOAA) Fisheries have determined to be federal candidates under the ESA (from H-1601-1, BLM Land Use Planning Handbook).

**Consistency.** Means that the proposed LUP does not conflict with officially approved plans, programs, and policies of tribes, other federal agencies, and state and local governments (to the extent practical within federal law, regulation, and policy) (from H-1601-1, BLM Land Use Planning Handbook).

**Cooperating Agency.** Assists the lead federal agency in developing an Environmental Assessment (EA) or Environmental Impact Statement (EIS). The Council on Environmental Quality (CEQ) regulations implementing the National Environmental Policy Act of 1969 (NEPA) define a cooperating agency as any agency that has jurisdiction by law or special expertise for proposals covered by NEPA (40 CFR 1501.6). Any federal, state, or local government jurisdiction with such qualifications may become a cooperating agency by agreement with the lead agency (from H-1601-1, BLM Land Use Planning Handbook).

**Council on Environmental Quality.** An advisory council to the President of the United States established by NEPA. It reviews federal programs to analyze and interpret environmental trends and information.

**Critical Habitat.** (1) The specific areas within the geographical area currently occupied by a species, at the time it is listed in accordance with ESA, on which are found those physical or biological features (i) essential to the conservation of the species and (ii) that may require special management considerations or protection, and (2) specific areas outside the geographical area occupied by a species at the time it is listed upon determination by the USFWS and/or NMFS that such areas are essential for the conservation of the species. Critical habitats are designated in 50 CFR 17 and 226. The constituent elements of critical habitat are those physical and biological features of designated or proposed critical habitat essential to the conservation of the species (from M6840, Special Status Species Manual).

**Crucial Value Habitat.** Any particular range or habitat component that directly limits a community, population, or subpopulation to reproduce and maintain itself at a certain level over the long term. Such habitat includes sensitive use areas that, because of limited abundance and/or unique qualities, constitute irreplaceable critical requirements for high-interest wildlife. It may also include highly sensitive habitats, including fragile soils that have little or no reclamation potential. Restoration or replacement of these habitats may not be possible. Examples include the most crucial (critical) summer and/or winter range or concentration areas; critical movement corridors; breeding and rearing complexes; spawning areas; developed wetlands; Class 1 and 2 streams, lakes, ponds, or reservoirs; and riparian habitats critical to high-interest wildlife.

**Crucial Winter Range.** The portion of the winter range to which a wildlife species is confined during periods of heaviest snow cover.

**Cryptobiotic Crust.** Biological communities that form a surface layer or crust on some soils. These communities consist of cyanobacteria (blue-green bacteria), micro fungi, mosses, lichens, and green algae and perform many important functions, including fixing nitrogen and carbon,

maintaining soil surface stability, and preventing erosion. Cryptobiotic crusts also influence the nutrient levels of soils and the status and germination of plants in the desert. These crusts are slow to recover after severe disturbance.

**Cultural Resource or Cultural Property.** A definite location of human activity, occupation, or use identifiable through field inventory (survey), historical documentation, or oral evidence. The term includes archaeological, historic, or architectural sites, structures, or places with important public and scientific uses, and may include definite locations (sites or places) of traditional cultural or religious importance to specified social and/or cultural groups. Cultural resources are concrete, material places and things that are located, classified, ranked, and managed through the system of identifying, protecting, and using for public benefit described in this manual series (from M-8100-1, BLM Cultural Resources Management).

**Cultural Resource Inventory Classes.** (See BLM Manual, Section 8110.21.) Class I: Existing Data Inventory. A study of published and unpublished documents, records, files, registers, and other sources, resulting in analysis and synthesis of all reasonably available data. Class I inventories encompass prehistoric, historic, and ethnological/sociological elements and are in large part chronicles of past land uses. They may have major relevance to current land use decisions. Class II: Sampling Field Inventory. A statistically based sample survey designed to help characterize the probable density, diversity, and distribution of archaeological properties in a large area by interpreting the results of surveying limited and discontinuous portions of the target area. Class III: Intensive Field Inventory. A continuous, intensive survey of an entire target area aimed at locating and recording all archaeological properties that have surface indications by walking close-interval parallel transects until the area has been thoroughly examined. Class III methods vary geographically, conforming to the prevailing standards for the region involved (from M-8100-1, BLM Cultural Resources Management).

**Cumulative Impact.** The impact on the environment resulting from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (from H-1790-1, BLM NEPA Handbook).

**Designated Roads and Trails.** Specific roads and trails identified by the BLM (or other agencies) where some type of motorized vehicle use is appropriate and allowed either seasonally or yearlong (from H-1601-1, BLM Land Use Planning Handbook).

**Dispersed or Extensive Recreation.** Recreation activities of an unstructured type that are not confined to specific locations or dependent on recreation sites. Example of these activities may be hunting, fishing, off-road vehicle use, hiking, and sightseeing.

**Disposal.** Transfer of public land out of federal ownership to another party through sale, exchange, Recreation and Public Purposes (R&PP) Act, Desert Land Entry, or other land law statutes.

**Disruptive Activities.** Activities that preclude basic life functions for a species. These activities could result in individuals leaving a currently used area; increased stress on the individual; and/or not breeding, young abandonment, or aberrant behavior.

**Easement.** An interest in land entitling the owner or holder, as a matter of right, to enter upon land owned by another party for a particular purpose.

**Eligibility.** Qualification of a river for inclusion into the National Wild and Scenic Rivers System through the determination (professional judgment) that it is free-flowing and, with its adjacent land area, possesses at least one river-related value considered to be outstandingly remarkable (from M-8351, BLM WSR Policy and Program).

**Endangered Species.** Any species that is in danger of extinction throughout all or a significant portion of its range (from M6840, Special Status Species Manual).

**Environmental Assessment (EA).** (a) A concise public document for which a federal agency is responsible that serves to (1) briefly provide sufficient evidence and analysis for determining whether to prepare an EIS or a finding of no significant impact, (2) aid an agency's compliance with NEPA when no EIS is necessary, and (3) facilitate preparation of an EIS when one is necessary. (b) Shall include brief discussions of the need for the proposal, alternatives as required by Section 102(2)(E), environmental impacts of the proposed action and alternatives, and a listing of agencies and persons consulted (from H-1790-1, BLM NEPA Handbook).

**Environmental Impact Statement (EIS).** A detailed statement prepared by the responsible official in which a major federal action that significantly affects the quality of the human environment is described, alternatives to the proposed action provided, and effects analyzed (from BLM National Management Strategy for OHV Use on Public Lands).

**Ephemeral Stream.** A stream that flows only in direct response to precipitation and whose channel is at all times above the water table. Ephemeral streams generally do not flow continuously for more than 30 days and generally have more robust upland vegetation than that found outside of the ephemeral riparian-wetland area (U.S. Department of the Interior [USDOI] 1998).

**Exclusion Area.** Areas with sensitive resources and/or values where ROWs and Section 302 permits, leases, and easements would not be authorized.

**Executive Order (EO).** An EO is a presidential directive with the force of law. It does not need congressional approval. The Supreme Court has upheld EOs as valid either under the general constitutional grant of executive powers to the President or if authority for it was expressly granted to the President by the Congress. Congress can repeal or modify an EO by passing a new law; however, it must be signed by the President or overridden by his veto.

**Extensive Recreation Management Area (ERMA).** A public lands unit identified in LUPs containing all acreage not identified as a Special Recreation Management Area (SRMA). Recreation management actions within an ERMA are limited to only those of a custodial nature.

**Facies.** A lateral or vertical variation in the lithologic or paleontologic characteristics of a geologic formation that differs as a group from that elsewhere in the same formation. It is caused by or reflects a change in the depositional environments (Stokes 1986; Skinner & Porter 1992).

**Federal Lands.** As used in this document, lands owned by the United States, without reference to how the lands were acquired or what federal agency administers the lands. The term includes mineral estates or coal estates underlying private surface, but excludes lands held by the United States in trust for Indians, Aleuts, or Eskimos (see also Public Land).

**Federal Land Policy and Management Act (FLPMA) of 1976.** Public Law 94-579, October 21, 1976, often referred to as BLM's "Organic Act," which provides the majority of BLM's legislated authority, policy direction, and basic management guidance (from BLM National Management Strategy for OHV Use on Public Lands).

**Federal Register.** A daily publication that reports Presidential and federal agency documents (from BLM National Management Strategy for OHV Use on Public Lands).

**Fire Management Plan.** A strategic implementation-level plan that defines a program to manage wildland fire, fuel reduction, and fire rehabilitation based on an area's approved Resource Management Plan (RMP). Fire Management Plans must address a full range of fire management activities that support ecosystem sustainability, values to be protected, protection of firefighter and public safety, public health, and environmental issues. The plans must be consistent with resource management objectives and activities of the area.

**Fiscal Year.** The Federal Government's annual accounting period that begins on October 1 and ends on September 30 of the following calendar year.

**Fluid Minerals.** Oil, gas, coalbed natural gas, and geothermal resources.

**Forage.** Vegetation of all forms available and of a type used for animal consumption.

**Fragile Soils.** Soils with intrinsic properties and in areas that make them especially susceptible to erosion. These properties include high salt concentrations, very fine textures, shallow depths, and steep slopes (more than 30%).

**Front Country.** A recreation setting classification characterized by a setting on or near improved roads but away from highways that includes moderate evidence of human modification that generally harmonizes with the surrounding natural landscape. Surface and vegetative modifications are common. Structures, including small reservoirs, powerlines, and microwave installations, are generally scattered, remaining visually subordinate. Recreation facilities (e.g., campsites, restrooms, trails, and interpretive signs) are generally small and rustic.

**Functioning at Risk.** (1) Condition in which vegetation and soil are susceptible to losing their ability to sustain naturally functioning biotic communities. Human activities, past or present, may increase the risks (Rangeland Reform Final Environmental Impact Statement at 26). (2) Uplands or riparian-wetland areas that are properly functioning, but in which a soil, water, or vegetation attribute makes them susceptible to degradation and lessens their ability to sustain natural biotic communities. Uplands are particularly at risk if their soils are susceptible to

degradation. Human activities, past or present, may increase the risks (Rangeland Reform Draft Environmental Impact Statement Glossary). See also Properly Functioning Condition and Nonfunctioning Condition (from H-4180-1, BLM Standards for Rangeland Health).

**Geographic Information System (GIS).** A system of computer hardware, software, data, people, and applications that capture, store, edit, analyze, and graphically display a potentially wide array of geospatial information (from H-1601-1, BLM Land Use Planning Handbook).

**Goal.** A broad statement of a desired outcome; usually not quantifiable and may not have established time frames for achievement (from H-1601-1, BLM Land Use Planning Handbook).

**Guideline.** A practice, method, or technique determined to be appropriate to ensure that standards can be met or that significant progress can be made toward meeting the standard. Guidelines are tools such as grazing systems, vegetative treatments, or improvement projects that help managers and permittees to achieve standards. Guidelines may be adapted or modified when monitoring or other information indicates the guideline is not effective, or a better means of achieving the applicable standard becomes appropriate (from H-4180-1, BLM Standards for Rangeland Health).

**Habitat.** The place where an organism (plant or animal) lives. There are four major divisions of habitat, namely, terrestrial, freshwater, estuarine, and marine (from M6840, Special Status Species Manual).

**Habitat Management Plan (HMP).** An officially approved activity plan for a specific geographic area of public land. An HMP identifies wildlife habitat and related objectives, defines the sequence of actions to be implemented to achieve the objectives, and outlines procedures for evaluating accomplishments.

**Heritage Tourism.** A form of recreation that involves experiencing the settings, activities, and people that represent the past and present experiences, stories, and peoples. It may include historic, cultural, and natural resources and may be dispersed, self-guided, or tour-guided in any recreational setting.

**High-Value Habitat.** Any particular habitat that sustains a community, population, or subpopulation. It includes intensive use areas that because of relative wide distribution do not constitute crucial (Utah Division of Wildlife Resources [UDWR] critical) values but are highly important to high-interest wildlife. It may also include moderately sensitive habitats of high-interest species that have low reclamation potential. Class 3 streams, lakes, ponds, or reservoirs. Reconstruction or enhancement of these areas may be possible, but should be avoided if not possible. Examples include less crucial (critical) but more widely distributed summer and/or winter ranges, important feeding areas, areas of high wildlife diversity and/or density of high-interest species, natural wetlands, and all other riparian areas.

**Hydrology.** The science dealing with the properties, distribution, and circulation of water.

**Impacts (or Effects).** Environmental consequences (the scientific and analytical basis for comparison of alternatives) as a result of a proposed action. Effects may be either direct, which are caused by the action and occur at the same time and place, or indirect, which are caused by

the action and are later in time or farther removed in distance, but are still reasonably foreseeable, or cumulative (from BLM National Management Strategy for OHV Use on Public Lands).

**Implementation Decisions.** Decisions that take action to implement LUP decisions; generally appealable to the Interior Board of Land Appeals under 43 CFR 4.410 (from H-1601-1, BLM Land Use Planning Handbook).

**Implementation Plan.** A sub-geographic or site-specific plan written to implement decisions made in an LUP. Implementation plans include activity plans and project plans (they are types of implementation plans) (from H-1601-1, BLM Land Use Planning Handbook).

**Indian Tribe (or tribe).** Any Indian group in the conterminous United States that the Secretary of the Interior recognizes as possessing tribal status (listed periodically in the Federal Register) (from H-1601-1, BLM Land Use Planning Handbook).

**Indicators.** Components of a system whose characteristics (presence or absence, quantity, distribution) are used as an index of an attribute (e.g., rangeland health attribute) that are too difficult, inconvenient, or expensive to measure (Interagency Technical Reference 1734-8, 2000) (from H-4180-1, BLM Standards for Rangeland Health).

**Interdisciplinary Team.** Staff specialists representing identified skill and knowledge needs working together to resolve issues and provide recommendations to an authorized officer (from H-4180-1, BLM Standards for Rangeland Health).

**Intermittent or Seasonal Stream.** A stream that flows only at certain times of the year when it receives water from springs or from some surface source such as melting snow in mountainous areas. Generally, intermittent streams flow continuously for periods of at least 30 days and usually have visible vegetation or physical characteristics reflective of permanent water influences, such as the presence of cottonwoods (USDOI 1998).

**Land Tenure Adjustments.** Ownership or jurisdictional changes are referred as “Land Tenure Adjustments.” To improve the manageability of BLM lands and improve their usefulness to the public, the BLM has numerous authorities for “repositioning” lands into a more consolidated pattern, disposing of lands, acquiring lands, and entering into cooperative management agreements. These land pattern improvements are completed primarily through the use of land exchanges, but also through land sales, land acquisitions, jurisdictional transfers to other agencies, and the use of cooperative management agreements and leases.

**Land Use Allocation.** The identification in a LUP of the activities and foreseeable development that are allowed, restricted, or excluded for all or part of the decision area, based on desired future conditions (from H-1601-1, BLM Land Use Planning Handbook).

**Land Use Plan (LUP).** A set of decisions that establish management direction for land within an administrative area, as prescribed under the planning provisions of FLPMA; an assimilation of LUP-level decisions developed through the planning process outlined in 43 CFR 1600, regardless of the scale at which the decisions were developed. The term includes RMPs and Management Framework Plans (MFP) (from H-1601-1, BLM Land Use Planning Handbook).

**Land Use Plan Amendment.** The process for considering or making changes in the terms, conditions, and decisions of approved RMPs or MFPs. Usually only one or two issues are considered that involve only a portion of the decision area (from H-1601-1, BLM Land Use Planning Handbook).

**Land Use Plan Decision.** Establishes desired outcomes and actions needed to achieve them. Decisions are reached using the planning process in 43 CFR 1600. When they are presented to the public as proposed decisions, they can be protested to the BLM Director. They are not appealable to the Interior Board of Land Appeals (from H-1601-1, BLM Land Use Planning Handbook).

**Lease.** An authorization or contract by which one party conveys the use of property to another party in return for rental payments. FLPMA Section 302 provides BLM's authority to issue leases for the use, occupancy, and development of the public lands. Leases are also authorized under the R&PP Act for an established or definitely proposed project for which there is a reasonable timetable of development and satisfactory development and management plans (43 CFR 2741.5). Leases are issued for purposes such as communication sites, parks, and other recreational facilities. The regulations establishing procedures for the processing of these leases are found in 43 CFR 2920 and 2740.

**Lease Stipulation.** A modification of the terms and conditions on a lease form at the time of the lease sale.

**Leaseable Minerals.** Those minerals or materials designated as leaseable under the Mineral Leasing Act of 1920, as amended. They include coal, phosphate, asphalt, sulphur, potassium, sodium minerals, oil, and gas.

**Lek.** An assembly area where birds, especially Greater sage-grouse, carry on display and courtship behavior.

**Limited.** An area restricted at certain times, in certain areas, and/or to certain vehicular use. These restrictions may be of any type, but can generally be accommodated within the following type of categories: numbers of vehicles, types of vehicles, time or season of vehicle use, permitted use only, use on existing roads and trails, use on designated routes, and other restrictions (from BLM National Management Strategy for OHV Use on Public Lands).

**Limited-Value Habitat.** Habitat that is abundant and not essential to sustain a community, population, or subpopulation. Occasional use areas that are either sparsely populated or that show sporadic or unpredictable use by high-interest wildlife. These areas have limited reclamation potential. Wildlife may be displaced due to the common occurrence of these habitats. Examples include yearlong deer range of low habitat quality; Class 5 and 6 streams, lakes, ponds, or reservoirs; and low-quality habitat in juxtaposition to areas of higher wildlife values.

**Locatable Minerals.** Minerals subject to exploration, development, and disposal by staking mining claims as authorized by the Mining Law of 1872, as amended. This includes deposits of gold, silver, and other uncommon minerals not subject to lease or sale.

**Low-Value Habitat.** Habitat that is abundant and not essential to sustain a community, population, or subpopulation.

**Management Decision.** A decision made by the BLM to manage public lands. Management decisions include LUP decisions and implementation decisions (from H-1601-1, BLM Land Use Planning Handbook).

**Management Opportunities.** A component of the analysis of the management situation and actions or management directions that could be taken to resolve issues or management concerns.

**Middle Country.** A recreation setting classification characterized by a naturally setting landscape except for obvious primitive roads, with subtle human modifications, small areas with limited evidence of surface or vegetative disturbances, and evidence of primitive roads or motorized use. Small, isolated structures may be present. Contains maintained and marked trails, simple trailhead developments, improved signs, and very basic toilets.

**Mineral.** A naturally formed chemical element or compound having a definite chemical composition and, usually, a characteristic crystal form. A mineral is generally considered to be inorganic, although organic compounds are classified as minerals by some (American Geological Institute 1974). The term is also sometimes informally used to refer to resources such as oil, gas, coal, and stone that are derived from the earth.

**Mineral Entry.** The filing of a claim on public land to obtain the right to any locatable minerals it may contain.

**Mineral Materials.** Materials such as sand and gravel and common varieties of stone, pumice, pumicite, and clay that are not obtainable under the mining or leasing laws, but that can be acquired under the Materials Act of 1947, as amended.

**Mining Claim.** A parcel of land that a miner takes and holds for mining purposes, having acquired the right of possession by complying with the Mining Law and local laws and rules. A mining claim may contain as many adjoining locations as the locator may make or buy. There are four categories of mining claims: lode, placer, millsite, and tunnel site.

**Mitigation.** A method or process by which impacts from actions may be made less injurious to the environment through appropriate protective measures. 40 CFR 1508.20 further defines mitigation as (1) avoiding the impact altogether by not taking a certain action or parts of an action; (2) minimizing an impact by limiting the degree or magnitude of the action and its implementation; (3) rectifying the impact by repairing, rehabilitating, or restoring the affected environment; (4) reducing or eliminating the impact over time by preservation and maintenance; and (5) compensating for the impact by replacing or providing substitute resources or environments.

**Monitoring (Plan Monitoring).** The process of tracking the implementation of LUP decisions and collecting and assessing data/information necessary to evaluate the effectiveness of land use planning decisions (from H-1601-1, BLM Land Use Planning Handbook).

**Multiple Use.** The management of the public lands and their various resource values so that they are used in the combination that will best meet the present and future needs of the American people; making the most judicious use of the land for some or all of these resources or related services over areas large enough to provide sufficient latitude for periodic adjustments in use to changing needs and conditions; the use of some land for less than all of the resources; a combination of balanced and diverse resource uses that takes into account the long-term needs of future generations for renewable and nonrenewable resources, including but not limited to recreation; range; timber; minerals; watershed; wildlife and fish; and natural scenic, scientific, and historical values; and harmonious and coordinated management of the various resources without permanent impairment of the productivity of the land and the quality of the environment with consideration being given to the relative values of the resources and not necessarily to the combination of uses that will give the greatest economic return or the greatest unit output (from FLPMA, Title 43 Chapter 35, Subchapter I 1702[c]).

**National Environmental Policy Act of 1969.** NEPA establishes policy, sets goals (Section 101), and provides means (Section 102) for carrying out the policy. Section 102(2) contains “action-forcing” provisions to make sure that federal agencies act according to the letter and spirit of the Act. The President, federal agencies, and the courts share responsibility for enforcing the Act so as to achieve the substantive requirements of Section 101.

**National Register.** The National Register of Historic Places, expanded and maintained by the Secretary of the Interior, as authorized by Section 2(b) of the Historic Sites Act and Section 101(a)(1)(A) of the National Historic Preservation Act (NHPA). The National Register lists cultural properties found to qualify for inclusion because of their local, state, or national significance. Eligibility criteria and nomination procedures are found in 36 CFR 60. The Secretary’s administrative responsibility for the National Register is delegated to the National Park Service (from M-8100-1, BLM Cultural Resources Management).

**National Wild and Scenic River System.** A system of nationally designated rivers and their immediate environments that have outstandingly remarkable values such as; scenic, recreational, geologic, fish and wildlife, historic, cultural, and other similar values and are preserved in a free-flowing condition. The system consists of three river classifications: (1) “recreational”—rivers or sections of rivers that are readily accessible by road or railroad and that may have some development along their shorelines and may have undergone some impoundments or diversion in the past; (2) “scenic”—rivers or sections of rivers free of impoundments with shorelines or watersheds still largely undeveloped but accessible in places by roads; and (3) “wild”—rivers or sections of rivers free of impoundments and generally inaccessible except by trails, with watersheds or shorelines essentially primitive and waters unpolluted. All rivers or river segments in these classifications must possess at least one outstandingly remarkable value that is river related.

**Naturalness.** Lands and resources exhibit a high degree of naturalness when affected primarily by the forces of nature and where the imprint of human activity is substantially unnoticeable. The BLM has authority to inventory, assess, and/or monitor the attributes of the lands and resources on public lands, which taken together are an indication of an area’s naturalness. These attributes may include the presence or absence of roads and trails, fences, and other improvements; the nature and extent of landscape modifications; the presence of native vegetation communities; the

resemblance to pre-European settlement condition; and the connectivity of habitats (from IM-2003-275, Change 1, Considerations of Wilderness Characteristics in LUP, Attachment 1).

**No Surface Occupancy.** A fluid minerals leasing constraint that prohibits occupancy or disturbance on all or part of the lease surface to protect special values or uses. Lessees may exploit the fluid mineral resources under the leases restricted by this constraint through use of directional drilling from sites outside the area.

**Noxious Weed.** A plant species designated by federal or state law as generally possessing one or more of the following characteristics: aggressive and difficult to manage; parasitic; a carrier or host of serious insects or disease; or non-native, new, or not common to the United States.

**Objective.** A description of a desired condition for a resource. Objectives can be quantified and measured and, where possible, have established time frames for achievement (from H-1601-1, BLM Land Use Planning Handbook).

**Off-Highway Vehicle (OHV).** Any motorized vehicle capable of or designed for travel on or immediately over land, water, or other natural terrain, excluding (1) any non-amphibious registered motorboat; (2) any military, fire, emergency, or law enforcement vehicle while being used for emergency purposes; (3) any vehicle whose use is expressly authorized by the authorized officer or otherwise officially approved; (4) vehicles in official use; and (5) any combat or combat support vehicle when used for national defense (from H-1601-1, BLM Land Use Planning Handbook).

**Official Use.** Use by an employee, agent, or designated representative of the Federal Government or one of its contractors in the course of his or her employment, agency responsibilities, or representation (from BLM National Management Strategy for OHV Use on Public Lands).

**Old-Growth.** Old-growth forests are ecosystems distinguished by old trees and related structural features. Old-growth encompasses the later stages of stand development that typically differ from earlier stages in several ways including tree size; accumulations of large dead, woody material; number of canopy layers; species composition; and ecosystem function (from BLM IM-2005-110).

**Open.** Generally denotes that an area is available for a particular use or uses. Refer to specific program definitions found in law, regulations, or policy guidance for application to individual programs (from H-1601-1, BLM Land Use Planning Handbook). For example, 43 CFR 8340.0-5 defines the specific meaning of “open” as it relates to OHV use as “an area where all types of vehicle use is permitted at all times, anywhere in the area subject to the operating regulations and vehicle standards set forth in” 43 CFR 8341 and 8342 (43 CFR 8340.0-5(f)).

**Outstandingly Remarkable Values (ORV).** Values among those listed in Section 1(b) of the Wild and Scenic Rivers Act: “scenic, recreational, geological, fish and wildlife, historical, cultural, or other similar values.” Other similar values that may be considered include ecological, biological or botanical, paleontological, hydrological, scientific, or research values (from M-8351, BLM WSR Policy and Program).

**Perennial Stream.** A stream that flows continuously. Perennial streams are generally associated with a water table in the localities through which they flow.

**Permit.** A short-term, revocable authorization to use public lands for specific purposes, FLPMA Section 302 provides the BLM's authority to issue permits for the use, occupancy, and development of the public lands. Permits are issued for purposes such as commercial or non-commercial filming, advertising displays, commercial or non-commercial croplands, apiaries, harvesting of native or introduced species, temporary or permanent facilities for commercial purposes (does not include mining claims), residential occupancy, construction equipment storage sites, assembly yards, oil rig stacking sites, mining claim occupancy if the residential structures are not incidental to the mining operation, and water pipelines and well pumps related to irrigation and non-irrigation facilities. The regulations establishing procedures for the processing of these permits are found in 43 CFR 2920.

**Permitted Use.** The forage allocated by or under the guidance of an applicable LUP for livestock grazing in an allotment under a permit or lease, and that is expressed in AUMs (43 CFR 4100.0-5) (from H-4180-1, BLM Standards for Rangeland Health).

**Plan of Operations.** A plan for mining exploration and development that an operation must submit to the BLM for approval when more than 5 acres a year will be disturbed or when an operator plans to work in an area of critical environmental concern or a wilderness area. A Plan of Operations must be submitted for any new operation that began after January 20, 2001, and that has production, regardless of acreage disturbed. A Plan of Operations must document in detail all actions that the operator plans to take from exploration through reclamation.

**Planning Criteria.** The standards, rules, and other factors developed by managers and interdisciplinary teams for their use in forming judgments about decision-making, analysis, and data collection during planning. Planning criteria streamline and simplify the resource management planning actions (from H-1601-1, BLM Land Use Planning Handbook).

**Potential Natural Community (PNC).** The biotic community that would become established if all successional sequences were completed without interference by man under the present environmental conditions. Natural disturbances are inherent in development. PNCs can include naturalized non-native species (BLM 2001a).

**Prescribed Fire.** Any fire ignited by management action to meet specific objectives. A written approved prescribed fire plan must exist, and NEPA requirements must be met prior to ignition (from H-9214-1, BLM Prescribed Fire Management Handbook).

**Primitive.** A recreation setting classification characterized by a setting that is essentially an unmodified natural environment with extremely rare evidence of surface or vegetative disturbances. Trails may be present and suited for wilderness use. Structures are small and extremely rare. Enforcement presence is very rare.

**Primitive and Unconfined Recreation.** Those activities that provide dispersed, undeveloped recreation which do not require facilities or motorized equipment (from BLM Manual 8560, Section 08, Subsection A).

**Project Plan.** A type of implementation plan (see Implementation Plan). A project plan typically addresses individual projects or several related projects. Examples of project plans include prescribed burn plans, trail plans, and recreation site plans (from H-1601-1, BLM Land Use Planning Handbook).

**Proper Functioning Condition (PFC).** (1) An element of the Fundamentals of Rangeland Health for watersheds, and therefore a required element of state or regional standard and guidelines under 43 CFR 4180.2(b). (2) A condition in which vegetation and ground cover maintain soil conditions that can sustain natural biotic communities. For riparian areas, the process of determining function is described in BLM Technical Reference (TR) 1737-9. (3) Riparian-wetland areas are functioning properly when adequate vegetation, landform, or large woody debris is present to dissipate stream energy associated with high water flows, thereby reducing erosion and improving water quality; filter sediment, capture bed load, and aid floodplain development; improve floodwater retention and groundwater recharge; develop root masses that stabilize streambanks against cutting action; develop diverse ponding and channel characteristics to provide the habitat and the water depth, duration, and temperature necessary for fish production, waterfowl breeding, and other uses; and support greater biodiversity. The functioning condition of riparian-wetland areas is influenced by geomorphic features, soil, water, and vegetation. (4) Uplands function properly when the existing vegetation and ground cover maintain soil conditions capable of sustaining natural biotic communities. The functioning condition of uplands is influenced by geomorphic features, soil, water, and vegetation. See also, Nonfunctioning Condition and Functioning at Risk (from H-4180-1, BLM Standards for Rangeland Health).

**Proposed Species.** Species that have been officially proposed for listing as threatened or endangered by the Secretary of the Interior. A proposed rule has been published in the Federal Register (from M6840, Special Status Species Manual).

**Public Land.** Land or interest in land owned by the United States and administered by the Secretary of the Interior through the BLM without regard to how the United States acquired ownership, except lands located on the Outer Continental Shelf and land held for the benefit of Indians, Aleuts, and Eskimos (from H-1601-1, BLM Land Use Planning Handbook).

**Range Improvement.** An authorized physical modification or treatment designed to improve production of forage; change vegetation composition; control patterns of use; provide water; stabilize soil and water conditions; and restore, protect, and improve the condition of rangeland ecosystems to benefit livestock, wild horses and burros, and fish and wildlife. The term includes, but is not limited to structures, treatment projects, and use of mechanical devices or modifications achieved through mechanical means (43 CFR 4100.0-5) (from H-4180-1, BLM Standards for Rangeland Health).

**Rangeland.** A kind of land on which the native vegetation, climax, or natural potential consists predominantly of grasses, grasslike plants, forbs, or shrubs. Rangeland includes lands revegetated naturally or artificially to provide a non-crop plant cover that is managed like native vegetation. Rangeland may consist of natural grasslands, savannahs, shrublands, most deserts, tundra, alpine communities, coastal marshes, and wet meadows (from H-4180-1, BLM Standards for Rangeland Health).

**Recreation and Public Purposes Act.** The R&PP Act provides for the lease and sale of public lands determined valuable for public purposes. The objective of the R&PP Act is to meet the needs of state and local government agencies and non-profit organizations by leasing or conveying public land required for recreation and public purpose uses. Examples of uses made of R&PP lands are parks and greenbelts, sanitary landfills, schools, religious facilities, and camps for youth groups. The Act provides substantial cost-benefits for land acquisition and provides for recreation facilities or historical monuments at no cost.

**Recreation Management Zones (RMZ).** Subunits within a SRMA managed for distinctly different recreation products. Recreation products are comprised of recreation opportunities, the natural resource and community settings within which they occur, and the administrative and service environment created by all affecting recreation-tourism providers, within which recreation participation occurs (from H-1601-1, BLM Land Use Planning Handbook).

**Recreation River.** A Wild and Scenic River Tentative Classification that applies to those rivers or sections of rivers readily accessible by road or railroad that may have some development along their shorelines and that may have undergone some impoundment or diversion in the past and possess at least one river-related outstandingly remarkable value.

**Relict Plant Community.** A remnant or fragment of the vegetation of an area that remains from a former period when the vegetation was more widely distributed.

**Resource Management Plan (RMP).** A BLM planning document, prepared in accordance with FLPMA Section 202, that presents systematic guidelines for making resource management decisions. An RMP is based on an analysis of an area's resources, its existing management, and its capability for alternative uses. RMPs are issue oriented and developed by an interdisciplinary team with public participation.

**Resource Use Level.** The level of use allowed within an area, based on the desired outcomes and land use allocations in the LUP. Targets or goals for resource use levels are established on an areawide or broad watershed level in the LUP. Site-specific resource use levels are normally determined at the implementation level, based on site-specific resource conditions and needs as determined through resource monitoring and assessments (from H-1601-1, BLM Land Use Planning Handbook).

**Right-of-Way (ROW).** The public lands authorized to be used or occupied for the construction, operation, maintenance, and termination of a project, pursuant to a ROW authorization.

**Riparian Area.** A form of wetland transition between permanently saturated wetlands and upland areas. A riparian area is defined as an area of land directly influenced by permanent (surface or subsurface) water. Riparian areas exhibit vegetation or physical characteristics that reflect the influence of permanent surface or subsurface water. Typical riparian areas include lands along, adjacent to, or contiguous with perennially and intermittently flowing rivers and streams, hanging gardens, and areas surrounding seeps and springs. Excluded are ephemeral streams or washes that lack vegetation and depend on free water in the soil.

**Rural.** A recreation setting classification characterized by a substantially modified natural setting with culturally modified landscapes constantly in view. The setting may include pastoral,

agricultural landscapes. Surface and vegetative modifications are typical, and constructed roads and highways are present. Structures are readily apparent and may include small dominant clusters, including campgrounds, group shelters, boat launches, and exhibits.

**Salable Minerals.** Common variety minerals on the public lands, such as sand and gravel, which are used mainly for construction and are disposed of by sales or special permits.

**Scenic Backways.** Paved or unpaved routes that have roadsides or corridors of special aesthetic, cultural, or historic value in more remote, less visited locations. The corridor may contain outstanding scenic vistas, unusual geologic features, or other intrinsic qualities such as cultural, historic, natural, recreational, and archaeological values. Scenic Backways can be designated at either the state level or by the BLM during the land use planning process.

**Scenic Byways.** Highway routes that have roadsides or corridors of special aesthetic, cultural, or historic value. The corridor may contain outstanding scenic vistas, unusual geologic features, or other intrinsic qualities such as cultural, historic, natural, recreational, and archaeological values. Scenic Byways can be designated at either the state or the federal level.

**Scenic Quality.** The relative worth of a landscape from a visual perception point of view.

**Scenic River.** A Wild and Scenic River Tentative Classification that applies to those rivers or sections of rivers that is free of impoundments and whose shorelines are largely undeveloped but accessible in places by roads and possess at least one river-related outstandingly remarkable value.

**Scoping.** An early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to a proposed action. This involves the participation of affected federal, state, and local agencies and any affected Indian tribe, proponent of the action, and other interested persons unless there is a limited exception under 40 CFR 1507.3I.

**Section 7 Consultation.** The requirement of Section 7 of the ESA that all federal agencies consult with USFWS or NMFS if a proposed action may affect a federally listed species or its critical habitat.

**Section 106 Compliance.** The requirement of NHPA Section 106 that any project funded, licensed, permitted, or assisted by the Federal Government be reviewed for impacts to significant historic properties and that the State Historic Preservation Officer and the Advisory Council on Historic Preservation be allowed to comment on a project.

**Sensitive Soils.** Soils that have a high wind or water erosion hazard, are difficult to reclaim or restore due to physical and chemical properties (e.g., high salt or gypsum concentrations, high rock content, or low available water), or that are more susceptible to impacts and damage due to high water tables (hydric or wetland/riparian soils) or very fine surface textures. Information used to identify sensitive soils includes soils surveys, ecological site descriptions, local monitoring records, and research studies.

**Sensitive Species.** Those species designated by a State Director, usually in cooperation with the state agency responsible for managing the species and state natural heritage programs, as

sensitive. They are those species that (1) could become endangered in or extirpated from a state or within a significant portion of its distribution; (2) are under status review by USFWS and/or NMFS; (3) are undergoing significant current or predicted downward trends in habitat capability that would reduce a species' existing distribution; (4) are undergoing significant current or predicted downward trends in population or density such that federal listed, proposed, or candidate or state listed status may become necessary; (5) typically have small and widely dispersed populations; (6) inhabit ecological refugia or other specialized or unique habitats; or (7) are state listed but which may be better conserved through application of BLM sensitive species status (from M6840, Special Status Species Manual).

**Significant.** An effect that is analyzed in the context of the proposed action to determine the degree or magnitude of importance of the effect, whether beneficial or adverse. The degree of significance can be related to other actions with individually insignificant but cumulatively significant impacts.

**Special Recreation Management Area (SRMA).** A public lands unit identified in LUPs to direct recreation funding and personnel to fulfill commitments made to provide specific, structured recreation opportunities (i.e., activity, experience, and benefit opportunities). The BLM recognizes three distinct types of SRMAs: destination, community, and undeveloped (from H-1601-1, BLM Land Use Planning Handbook).

**Special Status Species.** Includes proposed species, listed species, and candidate species under the ESA; state-listed species; and BLM State Director-designated sensitive species (see BLM Manual 6840, Special Status Species Policy) (from H-1601-1, BLM Land Use Planning Handbook).

**Solitude.** The state of being alone or remote from habitations; isolation; a lonely, unfrequented, or secluded place. The emphasis is on the opportunities a person has to avoid the sights, sounds, and evidence of other people within a particular area (from BLM Manual 8560, Section 08, Subsection A).

**Standard.** A description of the physical and biological conditions or degree of function required for healthy, sustainable lands (e.g., Land Health Standards). To be expressed as a desired outcome (goal) (from H-1601-1, BLM Land Use Planning Handbook).

**State Listed Species.** Species listed by a state in a category implying but not limited to potential endangerment or extinction. Listing is either by legislation or regulation (from M6840, Special Status Species Manual).

**Strutting Ground.** An area used by Greater sage-grouse in early spring for elaborate, ritualized courtship displays (see also Lek).

**Substantial Value Habitats.** Any particular habitat that is common or of intermediate importance. Existence areas are used regularly by high-interest wildlife, but are moderate levels with little or no concentrated use. These areas may also include moderately sensitive habitats of high-interest species with moderate reclamation potential. Wildlife uses may be displaced in response to development. Examples include extensive summer and/or winter ranges receiving

regular use well below carrying capacity having little potential for increase due to other limiting factors; Class 4 streams, lakes, ponds, or reservoirs; and areas of moderate habitat quality.

**Suppression.** All the work of extinguishing or containing a fire, beginning with its discovery.

**Surface Disturbance.** Greater than casual use actions created through mechanized or mechanical means that would cause soil mixing and result in alteration or removal of soil and vegetation, exposing the mineral soil to erosive processes to the extent that reclamation may be required. These actions may include the use of mechanized earth-moving equipment; truck-mounted drilling equipment; geophysical exploration; vehicle travel off routes in areas designated as limited or closed to OHV use; placement of surface facilities such as utilities, pipelines, structures, and oil and gas wells; new road construction; and use of pyrotechnics, explosives, and hazardous chemicals. Surface disturbing activities would not include livestock grazing, low-impact vegetation management tools (e.g., bullhog, hand thinning, or Dixie harrow), cross-country hiking, driving on designated routes, and scientific excavation and/or mitigation of limited scope approved by the Field Office Manager.

**Surface Occupancy.** Placement or construction on the land surface (either temporary or permanent) for more than 14 days requiring continual service or maintenance. Casual use is not included.

**Suspended Use.** Temporarily withheld use that is shown on a grazing permit, but is not available for active use because of a decision issued by the Authorized Officer or by agreement.

**Take.** Harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct. The term applies only to fish and wildlife (from M6840, Special Status Species Manual).

**Threatened Species.** Any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range (from M6840, Special Status Species Manual).

**Timing Limitation (Seasonal Restriction).** A fluid minerals leasing constraint that prohibits surface use during specified time periods in order to protect identified resource values. The constraint does not apply to the operation and maintenance of production facilities unless analysis demonstrates that such constraints are needed and that less stringent, project-specific constraints would be insufficient.

**Total Maximum Daily Load (TMDL).** An estimate of the total quantity of pollutants (from all sources including point, non-point, and natural) that may be allowed into waters without exceeding applicable water quality criteria (from H-1601-1, BLM Land Use Planning Handbook).

**Undertaking.** A project, activity, or program funded in whole or in part under the direct or indirect jurisdiction of a federal agency, including those carried out by or on behalf of a federal agency; those carried out with federal financial assistance; those requiring a federal permit, license, or approval; and those subject to state or local regulation administered pursuant to a delegation or approval by a federal agency.

**Unsuitability Criteria.** Criteria of the federal coal management program by which lands may be assessed as unsuitable for all or certain stipulated methods of coal mining (43 CFR 3461.5).

**Utility.** A service provided by a public utility, such as electricity, telephone, or water.

**Valid Existing Rights.** Legal “rights” or interest that are associated with a land or mineral estate and that cannot be divested from the estate until that interest expires or is relinquished. Lands within the decision area are subject to various authorizations, some giving “rights” to the holders and some of which could be construed as providing valid but lesser interests. Valid existing rights are established by various laws, leases, and filings under federal law.

Mineral: Authorizations for activities on existing mineral leases and mining claims are governed by valid existing rights. Valid existing rights vary from case to case with respect to oil and gas leases, mineral leases, and mining claims, but generally involve rights to explore, develop, and produce within the constraints of laws, regulations, and policies at the time the lease/claim was established or authorized.

Non-Mineral: There are other situations, unrelated to minerals, in which the BLM has authorized some use of public land or has conveyed some limited interest in public land. The authorization may be valid and existing and may convey some “right” or interest. Many ROWs, easements, and leases granted on public land are in this category. These types vary from case to case, but the details of each one are specified in the authorizing document. Valid and existing authorizations of this type would continue to be allowed subject to the terms and conditions of the authorizing document.

RS 2477: Some government entities may have a valid existing right to an access route under Revised Statute (RS) 2477, Act of June 26, 1866, ch. 262, §8, 14 Stat. 251 (codified as amended at 43 U.S.C. 932 until repealed in 1976 by FLPMA, Public Law 94-579, Section 706(a), Stat. 2744, 2793 [1976]), which granted “the ROW for the construction of highways over public lands, not reserved for public uses.”

Access: The presence of non-federal land and resources within the decision area has implications because owners of non-federal land or mineral rights surrounded by public land are entitled to reasonable access to their land or resources (State of Utah v Andrus, 1979). Reasonable access is defined as access that the Secretary of the Interior deems adequate to secure the owner reasonable use and enjoyment of the non-federal land. Such access is subject to rules and regulations governing the administration of public land. In determining reasonable access, the BLM has discretion to evaluate and would consider such things as proposed construction methods and location, reasonable alternatives, and reasonable terms and conditions as are necessary to protect the public interest and resources of the decision area.

Other: There are a variety of other land use authorizations that do not involve the granting of legal “rights” or interests. Outfitter and guide permits are an example. These permits authorize certain uses of public land for a specified time, under certain conditions, without conveying a right, title, or interest in the land or resources used. If at any time it is determined that an outfitter and guide permit, other such permit, or any

activities under those permits are not consistent with the approved RMP, then the authorization would be adjusted, mitigated, or revoked where legally possible. Grazing permits are also in this category. Grazing permits or leases convey no right, title, or interest in the land or resources used. Other applicable laws and regulations govern changes to existing grazing permits and levels of livestock grazing.

**Visual Resources.** The visible physical features of a landscape (topography, water, vegetation, animals, structures, and other features) that constitute the scenery of an area.

**Visual Resource Management (VRM).** The inventory and planning actions taken to identify visual values and establish objectives for managing those values, and the management actions taken to achieve the visual management objectives.

**Visual Resource Management Classes.** VRM classes define the degree of acceptable visual change within a characteristic landscape. A class is based on the physical and sociological characteristics of any given homogeneous area and serves as a management objective. There are four classes. Each class has an objective that prescribes the amount of change allowed in the characteristic landscape, as described below.

Class I: The objective for VRM Class I is to preserve the existing character of the landscape. This class provides for natural ecological changes; it does not preclude very limited management activity. The level of change to the characteristic landscape should be very low and must not attract attention.

Class II: The objective for VRM Class II is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.

Class III: The objective for VRM Class III is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Any changes should repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.

Class IV: The objective for VRM Class IV is to provide for management activities that require major modification of the existing character of the landscape. The level of change to the characteristic landscape can be high. These management activities may dominate the view and be the major focus of viewer attention. However, every attempt should be made to minimize the impact of these activities through careful location; minimal disturbance; and repeating the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.

**Visual Sensitivity Levels.** Measures of public concern (e.g., high, medium, or low) for the maintenance of scenic quality.

**Water Quality.** The chemical, physical, and biological characteristics of water with respect to its suitability for a particular use.

**Watershed.** The fifth level of the hydrologic unit delineation system. A watershed is coded with 10 numerical digits, and watersheds range in size from 40,000 to 250,000 acres (Subcommittee on Spatial Water Data 2000) (from H-4180-1, BLM Standards for Rangeland Health).

**Watershed Health.** Watersheds are in or making significant progress toward properly functioning physical condition, including their upland, riparian-wetland, and aquatic components; soil and plant conditions support infiltration, soil moisture storage, and the release of water that are in balance with climate and landform and maintain or improve water quality, water quantity, and timing and duration of flow (BLM 1997a).

**Way.** A trace maintained solely by the passage of vehicles which has not been improved and/or maintained by mechanical means to ensure relatively regular and continuous use (from H-8550-1, Interim Management Policy for Lands Under Wilderness Review).

**Wild River.** A Wild and Scenic River Tentative Classification that applies to those rivers or sections of rivers that are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted and possess at least one river-related outstandingly remarkable value. These represent vestiges of primitive America.

**Wilderness.** A congressionally designated area of undeveloped federal land retaining its primeval character and influence, without permanent improvements or human habitation, that is protected and managed to preserve its natural conditions and that (1) generally appears to have been affected mainly by the forces of nature, with human imprints substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; (3) has at least 5,000 acres or is large enough to make practical its preservation and use in an unimpaired condition; and (4) may also contain ecological, geological, or other features of scientific, educational, scenic, or historic value.

**Wilderness Characteristics.** Features of the land associated with the concept of wilderness that specifically deal with naturalness and opportunities for solitude and primitive unconfined recreation. These characteristics may be considered in land use planning when BLM determines that those characteristics are reasonably present, of sufficient value (condition, uniqueness, relevance, importance) and need (trend, risk), and are practicable to manage (from IM-2003-275, Change 1, Considerations of Wilderness Characteristics in LUP, Attachment 1).

**Wilderness Study Area (WSA).** Areas that have been inventoried and found to have wilderness characteristics as described in FLPMA Section 603 and Section 2(c) of the Wilderness Act of 1964. These areas are under study for possible inclusion as a Wilderness Area in the National Wilderness Preservation System.

**Wildfire:** An unplanned, unwanted wildland fire including unauthorized human-caused fires, escaped wildland fire use events, escaped prescribed fire projects, and all other wildland fires where the objective is to put the fire out.

**Wilding.** A plant growing uncultivated in the wild either as a native or an escape. Specifically, the collection of such whole live plants.

**Wildland Fire.** Any fire, regardless of ignition source, that is burning outside of a prescribed fire and any fire burning on public lands or threatening public land resources, where no fire prescription standards have been prepared (from H-1742-1, BLM Emergency Fire Rehabilitation Handbook).

**Wildland Fire Use.** The management of naturally ignited wildland fires to accomplish specific pre-stated resource management objectives in pre-defined geographic areas outlined in Fire Management Plans.

**Wildland-Urban Interface (WUI).** The line, area, or zone in which structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels.

**Withdrawal.** Removal or withholding an area of federal land from settlement, sale, location, or entry, under some or all of the general land laws, for the purpose of limiting activities under those laws in order to maintain other public values in the area or reserving the area for a particular public purpose or program; or transferring jurisdiction over an area of federal land, other than “property” governed by the Federal Property and Administrative Services Act, as amended (40 U.S.C. 472), from one department, bureau, or agency to another department, bureau, or agency (from FLPMA, Title 43, Chapter 35, Subchapter I 1702(j)).

**Woodland.** A forest community occupied primarily by non-commercial species such as juniper, pinyon pine, mountain mahogany, or quaking aspen groves; all western juniper forestlands are considered woodlands because juniper is classified as a non-commercial species.

## LIST OF PREPARERS

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## **APPENDICES 1–17**

## APPENDIX 1—BEST MANAGEMENT PRACTICES FOR LAND USES

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Best management practices (BMP) are those land and resource management techniques determined to be the most effective and practical means of maximizing beneficial results and minimizing conflicts and negative environmental impacts from management actions. BMPs can include structural and nonstructural controls, specific operations, and maintenance procedures. BMPs can be applied before, during, and after activities to reduce or eliminate negative environmental impacts. BMPs are not one-size-fits-all solutions. BMPs should be selected and adapted through interdisciplinary analysis to determine which management practices are necessary to meet the goals and objectives of the Resource Management Plan (RMP). The best practices and mitigation measures for a particular site are evaluated through the site-specific National Environmental Policy Act process and vary to accommodate unique, site-specific conditions and local resource conditions.

BMPs described in this appendix are designed to assist in achieving RMP goals and objectives. These BMPs could apply, where appropriate, to all use authorizations, including projects initiated by the Bureau of Land Management (BLM). BMPs are dynamic and should not be interpreted as specific direction at the same level as RMP decisions. BMPs are selected and implemented as necessary, based on site-specific conditions, to meet resource objectives for specific management actions.

This appendix does not provide an exhaustive list of BMPs. Additional BMPs may be identified during an interdisciplinary process when evaluating site-specific management actions. Implementation and effectiveness of BMPs need to be monitored to determine whether they are achieving RMP goals and objectives. Adjustments to BMPs can be made as necessary to ensure that RMP goals and objectives are being met as well as to conform to changes in BLM regulations, policy, and direction or new scientific information. In addition, project proponents can suggest alternate conditions that could accomplish the same result.

Because the management of environmental impacts is an ongoing process, continual refinement of BMP design is necessary. This process can be described in these five steps: (1) selection of the design of a specific BMP, (2) application of the BMP, (3) monitoring, (4) evaluation, and (5) feedback. Data gathered through monitoring is evaluated and used to identify changes needed in BMP design and application or in the monitoring program.

BMPs have been developed and used by numerous energy companies and state and federal agencies throughout the nation. Development and sharing of BMPs represents a commitment to the idea that smart planning and responsible follow-through manage and, in some cases, reduce impacts on resources, both now and in the future. BMPs developed by other agencies should be considered in addition to those identified in this document. Some of these other BMPs are contained in the following documents and websites:

- Utah's Forest Water Quality Guidelines: A Practical User's Guide for Landowners, Loggers, and Resource Managers (State of Utah, Department of Natural Resources,

Division of Forestry, Fire and State Lands). As of November 2006, an electronic version of this document was available at <http://extension.usu.edu/forestry/Management/UtFWQGuide/Assets/PDFDocs/UFWQGBOO.pdf>.

- Coalbed Methane Best Management Practices: A Handbook – 2006 Update (Western Governors' Association). As of November 2006, an electronic version of this document was available at [www.westgov.org/wga/initiatives/coalbed](http://www.westgov.org/wga/initiatives/coalbed).
- Low-Volume Roads Engineering Best Management Practices Field Guide (U.S. Forest Service). As of November 2006, an electronic version of this document was available at [www.blm.gov/bmp/field%20guide.htm](http://www.blm.gov/bmp/field%20guide.htm).
- Water-Road Interaction Technology Series Documents (U.S. Forest Service). As of November 2006, electronic versions of these documents were available at [www.stream.fs.fed.us/water-road](http://www.stream.fs.fed.us/water-road).
- National Menu of Stormwater Best Management Practices (U.S. Environmental Protection Agency). As of November 2006, electronic versions of these documents were available at [http://cfpub.epa.gov/npdes/stormwater/menuofbmps/con\\_site.cfm](http://cfpub.epa.gov/npdes/stormwater/menuofbmps/con_site.cfm).
- BLM Vegetation Treatments Using Herbicides Final Programmatic Environmental Impact Statement Record of Decision, September 2007. As of April 2008, an electronic version of this document was available at [http://www.blm.gov/wo/st/en/prog/more/veg\\_eis.html](http://www.blm.gov/wo/st/en/prog/more/veg_eis.html).
- Technical Information Sheets: Specific and Detailed BMP Guidance (Bureau of Land Management). As of November 2006, an electronic version of this document was available through hyperlinks located at [www.blm.gov/bmp/Technical\\_Information.htm](http://www.blm.gov/bmp/Technical_Information.htm).
- WO IM 2007-021 Integration of Best Management Practices into Applications for Permit to Drill Approvals and Associated Rights of Way. This document establishes formal BLM policy on the inclusion and use of BMPs with energy development. As of November 2006, an electronic version of this document was available at [http://www.blm.gov/wo/st/en/prog/energy/oil\\_and\\_gas/best\\_management\\_practices.html](http://www.blm.gov/wo/st/en/prog/energy/oil_and_gas/best_management_practices.html).
- *Surface Operating Standards and Guidelines for Oil and Gas Exploration and Development: The Gold Book* (BLM). As of November 2006, an electronic version of this document was available through hyperlinks located at [www.blm.gov/bmp/Technical\\_Information.htm](http://www.blm.gov/bmp/Technical_Information.htm).

In addition, this appendix contains conservation measures identified jointly by the BLM and the U.S. Fish and Wildlife Service (USFWS) as needed to protect specific threatened or endangered species. These conservation measures are targeted to specific species and must be considered and applied as appropriate.

## POTENTIAL BEST MANAGEMENT PRACTICES

### Surface Disturbing Activities

- Areas subject to surface disturbance should be evaluated for the presence of cultural resources or values. This is usually accomplished through the completion of a cultural clearance. An on-the-ground inspection by a qualified archaeologist, historian, or paleontologist is required. In cases where cultural resources are found, the preferred

response would be to modify the proposed action to avoid the cultural resource (avoidance). If avoidance is not possible, actions would be taken to preserve the data or value represented by the cultural resource (mitigation).

- Areas subject to surface disturbance would be evaluated for the presence of threatened, endangered, or candidate animal or plant species. This is usually accomplished through the completion of a biological clearance. An on-the-ground inspection by a qualified biologist is required. In cases where threatened, endangered, or candidate species are affected, the preferred response would be to modify the proposed action to avoid the species or its habitat (avoidance). If avoidance of a threatened, endangered, or candidate species or its habitat is not possible, a Section 7 consultation with USFWS would be required and a biological assessment would be prepared to recommend actions to protect the species or its habitat.
- Special design and reclamation measures may be required to protect scenic and natural landscape values. These measures may include transplanting trees and shrubs, mulching and fertilizing disturbed areas, using low-profile permanent facilities, and painting to minimize visual contrasts. Surface disturbing activities may be moved to avoid sensitive areas or to reduce the visual effects of the activities.
- Above-ground facilities requiring painting should be designed to blend in with the surrounding environment.
- Reclamation should be implemented concurrently with construction and site operations to the extent possible. Final reclamation actions should be initiated within 6 months of the termination of operations unless otherwise approved in writing by the authorized officer.
- Fill material should be pushed into cut areas and up over back slopes. Depressions should not be left that would trap water or form ponds.
- Design pipeline crossings through riparian areas and across stream channels to minimize impacts to these resources.

### **Mineral Exploration and Development**

- Reduce impacts on wildlife and visual resources by applying the following, as appropriate:
  - Directional drilling of oil and gas wells
  - Drilling of multiple wells from a single pad
  - Closed drilling systems
  - Cluster development
  - Below-ground wellheads
  - Remote well monitoring
  - Piping of produced liquids to centralized tank batteries off site to reduce traffic to individual wells
  - Transportation planning (e.g., to reduce road density and traffic volumes)
  - Compensation mitigation
  - Noise reduction techniques and designs
  - Installation of raptor anti-perch devices in Greater sage-grouse habitat
  - Monitoring of wildlife populations during drilling operations
  - Avoidance of human activity between 8 p.m. and 8 a.m. from March 1 through May 15 within ¼ mile of the perimeter of occupied Greater sage-grouse leks
  - Onsite bioremediation of oil field waste and spills

Removal of trash, junk, waste, and other materials not in current use.

- Reclaim all disturbed surface areas promptly, performing concurrent reclamation as necessary, and minimize the total amount of surface disturbance.
- Strip all surface soil prior to conducting operations, stockpiling, and reapplying during reclamation, regardless of soil quality. Minimize the length of time soil remains in stockpiles and the depth or thickness of stockpiles.
- Strip and separate soil surface horizons where feasible and reapply in proper sequence during reclamation.
- Establish vegetation cover on soil stockpiles that are to be in place longer than 1 year.
- Construct and rehabilitate temporary roads, consistent with intended use, to minimize total surface disturbance.
- Consider temporary measures such as silt fences, straw bales, and mulching to trap sediment in sensitive areas until reclaimed areas are stabilized with vegetation.
- Bury distribution powerlines and/or flow lines in or adjacent to access roads.
- Perform interim reclamation of well locations and access roads after wells are put into production.
- Reshape all areas to be permanently reclaimed to the approximate original contour, providing for proper surface drainage.

## **Road Design and Maintenance**

- Keep access roads to a minimum, using them only when necessary.
- Design roads to minimize total disturbance, to conform to topography, and to minimize disruption of natural drainage patterns.
- Design and maintenance of roads will conform to the BLM Manual and American Association of State Highway and Transportation Officials standards where applicable.
- Locate roads on stable terrain (such as ridgetops, natural benches, and flatter transitional slopes near ridges and valley bottoms and moderate sideslopes) and away from slumps, slide-prone areas, concave slopes, clay beds, and where rock layers are parallel to the slope. Locate roads on well-drained soil types; avoid wet areas.
- Construct roads for surface drainage by using outslopes, crowns, grade changes, drain dips, waterbars, and/or insloping to ditches as appropriate. Maintain drain dips, waterbars, road crowns, insloping, and outsloping, as appropriate, during road maintenance. Grade roads only as necessary.
- Slope the road base to the outside edge for surface drainage for local spurs or minor collector roads where low-volume traffic and lower traffic speeds are anticipated. This also is recommended in situations where long intervals between maintenance will occur and where minimum excavation is wanted. Outsloping is not recommended on steep slopes. Sloping the road base to the inside edge is an acceptable practice on roads with steep sideslopes and where the underlying soil formation is very rocky and not subject to appreciable erosion or failure.
- Construct arterial and collector roads with crown and ditching where traffic volume, speed, and intensity and user comfort are considerations. Recommended gradients range from 0 percent to 15 percent where crown and ditching may be applied, as long as adequate drainage away from the road surface and ditch lines is maintained.
- Construct roads when soils are dry and not frozen, if possible, in soil types with a low sand component. When these types of soils or road surfaces become saturated to a depth

of 3 inches, BLM-authorized activities should be limited or cease unless otherwise approved by the authorized officer.

- Retain vegetation between roads and streams to filter runoff caused by roads.
- Use culverts that pass, at a minimum, a 50-year storm event and/or have a minimum diameter of 24 inches for permanent stream crossings and a minimum diameter of 18 inches for road crossdrains.
- Strip and stockpile topsoil ahead of construction of new roads if feasible. Reapply soil to cuts and fillslopes prior to revegetation.
- Use existing roads whenever possible instead of constructing new roads.

### **Rights-of-Way and Utility Corridors**

- Rights-of-way (ROW) and utility corridors should use areas adjoining or adjacent to previously disturbed areas whenever possible.
- Disturbed areas within road ROWs and utility corridors should be stabilized by vegetation practices designed to hold soil in place and minimize erosion. Vegetation cover should be reestablished to increase infiltration and provide additional protection from erosion.
- Sediment barriers should be constructed when needed to slow runoff, allow deposition of sediment, and prevent transport from the site. Straining or filtration mechanisms also may be employed for the removal of sediment from runoff.

### **Noxious Weed Management**

- To reduce the potential for the introduction of noxious weeds, all equipment should be cleaned off, by pressure washing, prior to operating on BLM lands. Removal of all dirt, grease, and plant parts that may carry noxious weed seeds or vegetative parts is required.
- All seed, hay, straw, mulch, and other vegetation material transported and used on public land weed-free zones for site stability, rehabilitation, or project facilitation should be certified by a qualified federal, state, or county officer as free of noxious weeds and noxious weed seed.

### **Reducing Impacts on Visual Resource Management Class II and Class III Areas**

- Bury distribution powerlines and flow lines in or adjacent to access roads.
- Repeat form, line, color, and texture elements to blend facilities with the surrounding landscape.
- Paint all above-ground structures not requiring safety coloration an environmental color that is two shades darker than the surrounding environment.
- Perform final reclamation recontouring of all disturbed areas, including access roads, to the original contour or a contour that blends with the surrounding topography.
- Avoid facility placement on steep slopes, ridgetops, and hilltops.
- Reclaim unused well pads within 1 year.

## **Developed Recreation Sites**

- Construct recreation sites and provide appropriate sanitation facilities to minimize impacts on resource values and public health and safety and to minimize user conflicts of approved activities and access within an area as appropriate.
- Use public education and/or physical barriers (such as rocks, posts, and vegetation) to direct or preclude uses and to minimize impacts on resource values.

## **Riparian/Wetland Areas**

- Avoid locating roads, trails, and landings in wetlands.
- Locate, identify, and mark riparian management areas during the design of projects that may cause adverse impacts on riparian management areas.
- Keep open water free from slash.
- Avoid equipment operation in areas of open water, seeps, and springs.
- Use low-ground-pressure equipment (floatation tires or tracks) as necessary to minimize rutting and compaction.

## **Water Developments**

- Work in springs and stream beds should be done by hand where possible. If machinery is needed in these areas, select equipment that minimizes disturbance.
- After construction of spring head boxes, troughs, pipelines, and well sites, the areas should be cleaned up and refuse removed.
- Cuts, fills, and excavations should be dressed and seeded to blend with surroundings. Pipelines should be buried where possible.
- Original water sources should be protected, and fenced if required, and an offstream watering supply should be provided near the site.
- The size of storage tanks and troughs should accommodate the expected needs of livestock and wildlife using them.
- Water should be left at the site for wildlife. Wells should be cased to prevent cave-ins, and well sites should be fenced.
- Storage structures should be designed to provide water for wildlife. Drinking ramps should be installed, and their heights should not prohibit young wildlife from obtaining water.

## **APPENDIX 2—BEST MANAGEMENT PRACTICES FOR RAPTORS AND THEIR ASSOCIATED HABITATS**

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### **I. INTRODUCTION**

Raptors, or *Birds of Prey*, are found on public lands throughout Utah. Approximately 31 species of raptors use public lands for at least a portion of their life cycle. These include 20 diurnal raptors, including the eagles, hawks, falcons, osprey, turkey vulture, and California condor, and 11 mostly nocturnal owl species. At least 16 of the diurnal raptors are known to nest, roost, and forage on public lands; two others are probable nesters within the southern part of the state. The California condor is known to use public lands for roosting and foraging, but is not currently known to nest within the state. The rough-legged hawk is a winter resident that uses public lands for foraging. All of the owl species nest, roost, and forage on public lands in Utah.

Eight of Utah's raptors are considered to be special status species by the Bureau of Land Management (BLM) and currently receive enhanced protection from the BLM, in addition to the regulatory authority provided by the Migratory Bird Treaty Act (MBTA), which covers all raptor species. The Mexican spotted owl is listed as a federally threatened species and is afforded the protection and the Section 7 consultation requirements of the Endangered Species Act (ESA). The bald eagle was removed from the list of threatened and endangered species by the U.S. Fish and Wildlife Service (USFWS) in June 2007. The bald eagle and the golden eagle are protected by the provisions of the Eagle Protection Act. The California condor is a federally endangered species; however, the birds found in southern Utah are part of an Experimental Non-Essential Population reintroduced to northern Arizona under Section 10(j) of the ESA. The BLM is required to treat the condor as a species proposed for listing for ESA Section 7 purposes. The northern goshawk is managed by a multi-agency Conservation Agreement. The ferruginous hawk, short-eared owl, and burrowing owl are listed as Wildlife Species of Concern by the Utah Division of Wildlife Resources (UDWR, May 12, 2006) and are therefore recognized as BLM state-sensitive species under the BLM 6840 Manual. BLM's 6840 policy states, "BLM shall ... ensure that actions authorized, funded, or carried out ... do not contribute to the need for the species to become listed."

Future raptor management on BLM lands in Utah will be guided by the use of these best management practices (BMP), which are BLM-specific recommendations for implementation of the USFWS Utah Field Office's *Guidelines for Raptor Protection From Human and Land Use Disturbances* (Guidelines). The Guidelines were originally developed by USFWS in 1999 and were updated in 2002 to reflect changes brought about by court and policy decisions and to incorporate Executive Order 13186, Responsibilities of Federal Agencies To Protect Migratory Birds. The Guidelines were provided to BLM and other land management agencies in an attempt to provide raptor management consistency, while ensuring project compatibility with the biological requirements of raptors and encouraging an ecosystem approach to habitat management.

These BMPs, or specific elements of the BMPs that pertain to a proposal, should be attached as Conditions of Approval (COA) to all BLM use authorizations that have the potential to adversely

affect nesting raptors or would cause occupied nest sites to become unsuitable for nesting in subsequent years.

Raptor management is a dynamic and evolving science; consequently, as the science evolves, these BMPs will undergo subsequent revision. As more information becomes available through implementation of these raptor BMPs, and as our knowledge of raptor life-cycle requirements increases, findings will be incorporated into future revisions of the Guidelines. In addition, BLM and the U.S. Department of Energy are initiating a 3-year Raptor Raddi study that will test traditional spatial and seasonal nest buffers during oil and gas development activities for a select suite of species. Study results will also be incorporated into new BMP revisions.

To adequately manage raptors and their habitats, and to reduce the likelihood of a raptor species being listed under the ESA, BLM-authorized or BLM-proposed management activities and/or land disturbing actions would be subject to the criteria and processes specified within these BMPs. The implementation of raptor spatial and seasonal buffers under the BMPs would be consistent with Table 2 of the Guidelines, included here as Attachment 2. As specified in the Guidelines, modifications of spatial and seasonal buffers for BLM-authorized actions would be permitted as long as protection of nesting raptors is ensured. State and/or federally listed, proposed, and candidate raptor species, as well as BLM state-sensitive raptor species, should be afforded the highest level of protection through this BMP process; however, all raptor species would continue to receive protection under the MBTA. Modification of the buffers for threatened or endangered species would be considered pending results of Section 7 consultations with USFWS.

As stated in the Guidelines, spatial and seasonal buffers should be considered as the best available recommendations for protecting nesting raptors under a wide range of activities statewide. However, they are not necessarily site-specific to proposed projects. Land managers should evaluate the type and duration of the proposed activity, the position of topographic and vegetative features, the sensitivity of the affected species, the habituation of breeding pairs to existing activities in the proposed project area, and the local raptor nesting density when determining site-specific buffers. BLM would be encouraged to informally coordinate with UDWR and USFWS any time a site-specific analysis shows that an action may have an adverse impact on nesting raptors. The coordination would determine if the impact could be avoided or must be mitigated and, if so, determine appropriate and effective mitigation strategies.

Potential modifications of the spatial and seasonal buffers identified in the Guidelines may provide a viable management option. Modifications would ensure that nest protection would occur, while allowing various management options that may deviate from the suggested buffers within the Guidelines, which if adequately monitored could provide valuable information for incorporation into future management actions.

Seasonal raptor buffers from Attachment 2 should be reviewed by local raptor nesting authorities who are knowledgeable of raptor nesting chronologies within their local areas. For those nesting raptors for which local nesting chronologies remain uncertain, the seasonal buffers provided in Attachment 2 should serve as the default. However, for those raptor species whose known nesting chronologies differ from the seasonal buffers provided in Attachment 2, the local seasonal buffers may be used as a modification of the Guidelines.

Criteria that would need to be met, prior to implementing modifications to the spatial and seasonal buffers in the Guidelines, include the following:

1. Completion of a site-specific analysis by a wildlife biologist or other qualified individual (Attachment 1).
2. Written documentation by the BLM Field Office wildlife biologist, identifying the proposed modification and affirming that implementation of the proposed modification would not affect nest success or the suitability of the site for future nesting. Modification of the Guidelines would not be recommended if it is determined that adverse impacts on nesting raptors would occur or that the suitability of the site for future nesting would be compromised.
3. Development of a monitoring and mitigation strategy by a BLM biologist or other raptor biologist. Impacts of authorized activities would be documented to determine if the modifications were implemented as described in the environmental documentation or COA and were adequate to protect the nest site. Should adverse impacts be identified during monitoring of an activity BLM would follow an appropriate course of action, which may include cessation or modification of activities that would avoid, minimize, or mitigate the impact, or, with the approval of UDWR and USFWS, BLM could allow the activity to continue while requiring monitoring to determine the full impact of the activity on the affected raptor nest. A monitoring report would be completed and forwarded to UDWR for incorporation into the Natural Heritage Program raptor database.

In a further effort to provide additional support and expertise to local BLM field biologists, a network of biologists from various agencies with specific expertise in raptor management has been identified and included as Attachment 3. The personnel identified have extensive backgrounds in raptor management issues and are available, upon request, to assist BLM field biologists on a case-by-case basis. Field biologists are encouraged to use this network, via informal conferences, with one or more of the individuals identified. This coordination should be clearly distinguished from the consultation process required under ESA Section 7. Individuals on the expert panel should not be expected to provide formal advice, but should serve as a sounding board for discussing potential affects of a proposal as well as potential mitigation measures on specific projects that may be useful to BLM biologists.

## **II. HABITAT ENHANCEMENT**

As recommended in the Guidelines, raptor habitat management and enhancement, both within and outside of buffers, would be an integral part of these BMPs, with the understanding that in order for raptors to maintain high densities and maximum diversity, it is necessary that the habitat upon which they and their prey species depend be managed to promote healthy and productive ecosystems. Habitat loss or fragmentation would be minimized and/or mitigated to the extent practical and may include such measures as drilling multiple wellheads per pad, limiting access roads and avoiding loop roads to well pads, effectively rehabilitating or restoring plugged and abandoned well locations and access roads that are no longer required, rehabilitating or restoring areas affected by wildland fires to prevent domination by non-native invasive annual species, or implementing vegetation treatments and riparian restoration projects to achieve *Standards for Rangeland Health*.

In some cases, artificial nesting structures located in areas where preferred nesting substrates are limited, but where prey base populations are adequate and human disturbances are limited, may enhance some raptor populations or may serve as mitigation for impacts occurring in other areas.

### III. PROTECTION OF NEST SITES AND BUFFER ZONES

As stated in the Guidelines, protection of occupied and unoccupied nests is important because not all raptor pairs breed every year, nor do they always use the same nest within a nesting territory. Individual raptor nests left unused for a number of years are frequently reoccupied if all the nesting attributes that originally attracted a nesting pair to a location are still present. Nest sites are selected by breeding pairs for the preferred habitat attributes provided by that location.

Raptor nest buffer zones are established for planning purposes because the nest serves as the focal point for a nesting pair of raptors. The buffer should serve as a threshold for potential adverse impacts on nest initiation and productivity. Actions proposed within these buffer zones are considered potentially impacting, and therefore trigger the need for consideration of site-specific recommendations.

Seasonal (temporal) buffer zones are conservation measures intended to schedule potentially impacting activities to periods outside of the nesting season for a particular raptor species. These seasonal limitations are particularly applicable to actions proposed within the spatial buffer zone of a nest for short duration activities, such as pipeline or powerline construction, seismic exploration activity, vegetative treatments, fence or reservoir construction, or permitted recreational events, where subsequent human activity would not be expected to occur.

Spatial buffer zones are those physical areas around raptor nest sites where seasonal conservation measures or surface occupancy restrictions may be applied, depending on the type and duration of activity, distance and visibility of the activity from the nest site, adaptability of the raptor species to disturbance, etc. Surface occupancy restrictions should be used for actions that would involve human activities within the buffer zone for a long duration (more than one nesting season) and that would cause an occupied nest site to become unsuitable for nesting in subsequent years.

#### Unoccupied Nests

**All Activities, Including All Mineral Leases:** Surface disturbing activities occurring outside of the breeding season (seasonal buffer), but within the spatial buffer, would be allowed during a minimum 3-year nest monitoring period, as long as the activity would not cause the nest site to become unsuitable for future nesting, as determined by a wildlife biologist. Facilities and other permanent structures would be allowed if they meet the above criteria.

Examples of typical surface disturbing actions occurring outside of the seasonal buffer that may not be expected to affect nest production or future nesting suitability include pipelines, powerlines, seismographic exploration, communication sites, an oil or gas well with offsite facilities that does not require routine maintenance, recreation events, fence or reservoir construction, vegetative treatments, and other actions with discrete starting and ending times and for which subsequent human activity or heavy equipment operation within the spatial buffer

would not be expected to occur or could be scheduled outside of the seasonal buffer in subsequent years.

Surface disturbing activities that would be expected to potentially affect nest production or nest site suitability include oil and gas facilities requiring regular maintenance, sand and gravel operations, road systems, wind energy projects, mining operations, and other actions requiring continual, random human activity or heavy equipment operation during subsequent nesting seasons.

A nest site that does not exhibit evidence of use, such as greenery in the nest, fresh whitewash, obvious nest maintenance, and the observed presence of adults or young at the nest, for a period of 3 consecutive years (verified through monitoring) would be deemed abandoned and all seasonal and spatial restrictions would cease to apply to that nest. All subsequent authorizations for permanent activities within the spatial buffer of the nest could be permitted. If the nest becomes reoccupied after authorized activities are completed, conservation measures would be considered to reduce potential adverse affects and to comply with the MBTA and the Eagle Protection Act.

The 3-year non-use standard varies from the Guidelines' suggested 7-year non-use standard before declaring nest abandonment. This variation is based upon a similar standard that has been applied for more than 20 years in two administrative areas within Utah. Empirical evidence would suggest that the 3-year non-use standard has been effective in conserving raptor species. The 3-year standard has been applied without legal challenge or violation of "Take" under the MBTA or the Eagle Protection Act.

Because prey base populations are known to be cyclic, and because raptor nest initiation or nesting success can be affected by drought and other random natural events, care should be taken when applying the 3-year non-activity standard. The 3-year nest occupancy monitoring requirement should be viewed as a minimum time period during those years of optimal raptor nesting conditions. During suboptimal raptor nesting years, when nesting habitat may be affected by drought, low prey base populations, fire, or other events, the monitoring standard should be increased to allow raptors the opportunity to reoccupy nesting sites when nesting conditions become more favorable.

### **Occupied Nests**

**All Activities:** Land use activities that would have an adverse impact on an occupied raptor nest would not be allowed within the spatial or seasonal buffer.

## **IV. CONSIDERATION OF MITIGATION MEASURES**

Alternatives, including denial of the proposal, should be identified, considered, and analyzed in a National Environmental Policy Act (NEPA) document anytime an action is proposed within the spatial buffer zone of a raptor nest. Selection of a viable alternative that avoids an impact on nesting raptors should be selected over attempting to mitigate those impacts. If unavoidable impacts are identified, mitigation measures should be applied as necessary to mitigate adverse impacts of resource uses and development on nesting raptors. Monitoring of the effectiveness of

the mitigation measures should be mandatory and should be included as a Condition of Approval.

## **V. SPECIFIC STRATEGIES TO BE IMPLEMENTED REGARDING OTHER RESOURCE USES**

The following are management strategies designed to reduce or eliminate potential conflicts between raptors and other resource uses. This is a list of examples and is not intended to be an all-inclusive list. In all cases, when an activity on BLM lands is proposed and a NEPA document is developed, the Site-Specific Analysis (Attachment 1) may be implemented to identify and either avoid or mitigate impacts on raptors from the proposal. These strategies apply to both BLM and applicant-generated proposals.

### **A. Cultural Resources**

Excavation and studies of cultural resources in caves and around cliff areas should be delayed until a qualified biologist surveys the area to be disturbed or impacted by the activity for the presence of raptors or nest sites. If nesting raptors are present, the project should be rescheduled to occur outside of the seasonal buffer recommended by the Guidelines.

### **B. Forestry and Harvest of Woodland Products**

Timber harvest would be subject to NEPA analysis and would be conducted in a manner that would avoid impacts on raptor nests. This could also apply to areas identified for wood gathering and firewood sales.

### **C. Hazardous Fuel Reduction/Habitat Restoration Projects**

Hazardous fuel reduction projects and shrubsteppe restoration projects should be reviewed for possible impacts on nesting raptors. Removal of trees containing either stick nests or nesting cavities, through prescribed fire or mechanical or manual treatments, should be avoided.

It is important to note that certain raptor species are tied to specific habitat types, and that consideration must be made on a site-specific basis when vegetation manipulation projects are proposed in order to determine which raptor species may benefit and which may be negatively affected by the vegetation composition post-treatment.

### **D. Livestock Grazing**

Rangelands and riparian areas should be managed in a manner that promotes healthy, productive rangelands and functional riparian systems. Rangeland Health Assessments should be conducted on each grazing allotment, and rangeland guidelines should be implemented where *Standards for Rangeland Health* are not being met, to promote healthy rangelands.

Locations of sheep camps and other temporary intrusions would be located in areas away from raptor nest sites during the nesting season. Placement of salt and mineral blocks also would be located away from nesting areas.

Season of use, type of livestock, and target utilization levels of key species affect vegetative community attributes (such as percent cover and composition) and influence small mammal and avian species diversity and density. While not all raptor species would be affected in the same way, livestock management practices that maintain or enhance vegetative attributes will preserve prey species density and diversity, which will benefit the raptor resource.

### **E. Off-Highway Vehicle Use**

Special Recreation Management Areas (SRMA) that are developed for off-highway vehicle (OHV) use would not be located in areas that have important nesting, roosting, or foraging habitats for raptors.

OHV use would be limited to designated roads, trails, and managed open areas. Lands categorized as open for OHV use should not be in areas important to raptors for nesting, roosting, and foraging.

When proposals for OHV events are received, the area to be impacted would be surveyed by a qualified wildlife biologist to determine if the area is used by raptors. Potential conflicts would be identified and either avoided or mitigated prior to the issuance of any permit.

### **F. Oil and Gas Development**

The Code of Federal Regulations (CFR), 43 CFR 3101.1-2, allows for well site location and timing to be modified from that requested by the lessee to mitigate conflicts at the proposed site. It states that the location can be moved up to 200 meters, and the timing of the actual drilling can be delayed for up to 60 days to mitigate environmental concerns. The regulation also allows BLM to move a location more than 200 meters, or delay operations more than 60 days, to protect sensitive resources if supporting rationale and lesser restrictions are ineffective. The Site-Specific Analysis (Attachment 1) would provide the supporting rationale. Provisions also are present within Sections 3 and 6 of the Standard Lease Form, which require compliance with existing laws and would allow BLM to impose additional restrictions at the permitting phase if the restrictions will prevent violation of law, policy, or regulation or avoid undue and unnecessary degradation of lands or resources. (Additional stipulations and mitigations would be applied to coal developments and other energy-related developments as directed by the Guidelines and as directed in Chapter 2 of the Environmental Impact Statement.)

### **G. Realty**

Lands proposed for disposal, which include raptor nesting, roosting, or foraging areas, would be analyzed and evaluated for the relative significance of these resources before a decision is made for disposal or retention.

A priority list of important raptor habitat areas, especially for federally listed or state-sensitive raptor species, on state and private lands should be developed and used as lands to be acquired by BLM when opportunities arise to exchange or otherwise acquire lands.

Lands and realty authorizations would include appropriate conservation measures to avoid and/or mitigate impacts on raptors.

## **H. Recreation**

Development of biking trails near raptor nesting areas would be avoided.

Rock climbing activities would be authorized only in areas where there are no conflicts with cliff-nesting raptors.

In recreation high-use areas where raptor nest sites have been made unsuitable by existing disturbance or habitat alteration, mitigation to replace nest sites with artificial nest structures in nearby suitable habitat, if it exists, and seasonal protection of nest sites through fencing or other restrictions should be considered.

Dispersed recreation would be monitored to identify where this use may be impacting the nesting success of raptors.

## **I. Wild Horse Program**

In areas where wild horse numbers are determined to be in excess of the carrying capacity of the range, removal of horses, as described in the various herd management area plans, would continue in order to prevent further damage to rangelands.

## **VI. INVENTORY AND MONITORING**

Each field office should cooperatively manage a raptor database, with UDWR and USFWS, as part of the BLM corporate database. Raptor data should be collected and compiled using the Utah Raptor Data Collection Standards developed by the Utah State Office so that personnel from other agencies can access the data. Appropriate protocols for survey and monitoring should be followed when available. This database should be updated as new inventory and monitoring data becomes available. The data also should be forwarded to UDWR and the Natural Heritage Program, which has been identified as the central repository for raptor data storage for the State of Utah.

Use of seasonal employees and volunteers, as well as Challenge Cost Share projects, should be used to augment the inventory and monitoring of raptor nests within a planning area, with the data entered into the aforementioned databases at the close of each nesting season. Project proponents, such as energy development interests, would be encouraged to participate and help support an annual raptor nest monitoring effort within their areas of interest.

Active nest sites should be monitored during all authorized activities that may have an impact on the behavior or survival of the raptors at the nest site. A qualified biologist would conduct the monitoring and document the impacts of the activity on the species. A final report of the impacts of the project should be placed in the Environmental Assessment file, with a copy submitted to the Natural Heritage Program. The report would be made available for review, should identify which activities may affect raptor-nesting success, and should be used to recommend appropriate buffer zones for various raptor species.

As data is gathered and impact analyses are more accurately documented, adaptive management principles should be implemented. Authorization of future activities should take new information

into account, better protecting raptors, while potentially allowing more development and fewer restrictions if data indicates that current restrictions are beyond those necessary to protect nesting raptors or conversely indicates that current guidance is inadequate for protection of nesting raptors. If monitoring detects an impact on bird behavior, especially one that might result in "take" the activity could be suspended or modified so that the impacts are avoided or removed.

### ATTACHMENT 1: SITE-SPECIFIC ANALYSIS DATA SHEET

Observer(s) \_\_\_\_\_ Date \_\_\_\_\_

1. Conduct a site visit to the area of the proposed action and complete the raptor nest site data sheet according to BLM data standards.

2. Area of Interest Documentation (**Bold** items require completion, other information is optional)

**State** \_\_\_\_\_ **Office** \_\_\_\_\_ **Management Unit** \_\_\_\_\_

**Project ID#** \_\_\_\_\_

**Location (Description)**

Legal T \_\_\_\_\_, R \_\_\_\_\_, Sec. \_\_\_\_\_, 1/4, \_\_\_\_\_, 1/4, \_\_\_\_\_ or UTM Coordinates

Latitude \_\_\_\_\_ Longitude \_\_\_\_\_

**Photos Taken** Y ( ) N ( )

Description of photos:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Raptor Species** \_\_\_\_\_ **Confirmed** \_\_\_\_\_ **Unconfirmed** \_\_\_\_\_

**Distance From Proposed Disturbance to:** **Nest** \_\_\_\_\_

**Perch** \_\_\_\_\_

**Roost** \_\_\_\_\_

**Line of Site Evaluation From:** **Nest** \_\_\_\_\_

**Perch** \_\_\_\_\_

**Roost** \_\_\_\_\_

**Extent of Disturbance:** Permanent \_\_\_\_\_ Temporary \_\_\_\_\_

Distance from Nest/Roost \_\_\_\_\_ Acreage \_\_\_\_\_

Length of Time \_\_\_\_\_ Timing Variations \_\_\_\_\_ Disturbance Frequency \_\_\_\_\_

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**Other Disturbance Factors:** Yes (If yes, explain what and include distances from nest to disturbances) \_\_\_\_\_  
No \_\_\_\_\_

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**Approximate Age of Nest:** New \_\_\_\_\_ **Historical:** (Number of Years) \_\_\_\_\_

**Evidence of Use (Describe):**

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**Habitat Values Impacted:** \_\_\_\_\_

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**Proportion of Habitat Impacted (Relate in terms of habitat available):** \_\_\_\_\_

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**Estimated Noise Levels of Project (dB):** \_\_\_\_\_

**Available Alternative(s) (e.g., location, season, technology):** \_\_\_\_\_

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**Associated Activities:** \_\_\_\_\_

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**Cumulative Effects of Proposal and Other Actions in Habitat Not Associated With the Proposal:** \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Potential for Site Rehabilitation:** High \_\_\_\_\_ Low \_\_\_\_\_

Notes/Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Summary of Proposed Modifications:**

Possible modifications to the spatial and seasonal buffers within the *USFWS Utah Field Office Guidelines* include the following: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Rationale: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Summary of Proposed Mitigation Measures:**

Possible mitigation measures related to the proposal include the following: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Rationale: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Summary of Alternatives Considered:**

Possible alternatives to the proposal include the following: \_\_\_\_\_

\_\_\_\_\_

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Rationale: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Recommendation to FO Manager Based on Above Findings:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
Field Office Wildlife Biologist

Date

\_\_\_\_\_

## ATTACHMENT 2: NESTING PERIODS AND RECOMMENDED BUFFERS FOR RAPTORS IN UTAH

The following table is adapted from Table 2 of the Guidelines.

Species	Spatial Buffer (miles)	Seasonal Buffer	Incubation # Days	Brooding, # Days Post-Hatch	Fledging, # Days Post-Hatch	Post-Fledge Dependency to Nest, # Days <sup>1</sup>
Bald eagle	1.0	1/1–8/31	34–36	21–28	70–80	14–20
Golden eagle	0.5	1/1–8/31	43–45	30–40	66–75	14–20
Northern goshawk	0.5	3/1–8/15	36–38	20–22	34–41	20–22
Northern harrier	0.5	4/1–8/15	32–38	21–28	42	7
Cooper's hawk	0.5	3/15–8/31	32–36	14	27–34	10
Ferruginous hawk	0.5	3/1–8/1	32–33	21	38–48	7–10
Red-tailed hawk	0.5	3/15–8/15	30–35	35	45–46	14–18
Sharp-shinned hawk	0.5	3/15–8/31	32–35	15	24–27	12–16
Swainson's hawk	0.5	3/1–8/31	33–36	20	36–40	14
Turkey vulture	0.5	5/1–8/15	38–41	14	63–88	10–12
California condor	1.0	NN	56–58	5–8 weeks	5–6 months	2 months
Peregrine falcon	1.0	2/1–8/31	33–35	14–21	35–49	21
Prairie falcon	0.25	4/1–8/31	29–33	28	35–42	7–14
Merlin	0.5	4/1–8/31	28–32	7	30–35	7–19
American kestrel	NN <sup>2</sup>	4/1–8/15	26–32	8–10	27–30	12
Osprey	0.5	4/1–8/31	37–38	30–35	48–59	45–50
Boreal owl	0.25	2/1–7/31	25–32	20–24	28–36	12–14
Burrowing owl	0.25	3/1–8/31	27–30	20–22	40–45	21–28
Flammulated owl	0.25	4/1–9/30	21–22	12	22–25	7–14
Great horned owl	0.25	12/1–9/30	30–35	21–28	40–50	7–14
Long-eared owl	0.25	2/1–8/15	26–28	20–26	30–40	7–14
Northern saw-whet owl	0.25	3/1–8/31	26–28	20–22	27–34	7–14
Short-eared owl	0.25	3/1–8/1	24–29	12–18	24–27	7–14
Mexican spotted owl	0.5	3/1–8/31	28–32	14–21	34–36	10–12
Northern pygmy owl	0.25	4/1–8/1	27–31	10–14	28–30	7–14
Western screech owl	0.25	3/1–8/15	21–30	10–14	30–32	7–14
Common barn owl	NN <sup>2</sup>	2/1–9/15	30–34	20–22	56–62	7–14

<sup>1</sup> Length of post-fledge dependency period to parents is longer than reported in this table. Reported dependency periods reflect the amount of time the young are still dependent on the nest site (e.g., they return to the nest for feeding).

<sup>2</sup> As a result of apparent high population densities and ability to adapt to human activity, a spatial buffer is currently considered not necessary (NN) for maintenance of American kestrel or common barn owl populations. Actions resulting in direct mortality of individual birds and "take" of known nest sites are unlawful.

### **ATTACHMENT 3: UTAH RAPTOR MANAGEMENT EXPERTS FROM VARIOUS AGENCIES**

The following list of personnel contains individuals from various Utah and federal agencies who are recognized experts in the field of raptor ecology or have extensive field experience in managing raptor resources with competing land uses. The list is provided to inform BLM field biologists and managers of this network of specialized experts who may be able to assist, as time permits, with specific raptor management issues. Individuals in the Utah raptor network also have well-established contacts with an informal extended network of highly qualified raptor ecologists outside the state (e.g., U.S. Geological Survey, state wildlife agencies, and universities) who could provide an additional regional perspective.

This list is not intended to replace or interfere with established lines of communication but rather supplement these lines of communication.

<b>Utah BLM</b>	<b>David Mills</b>	<b>david_mills@blm.gov</b>	<b>435-896-1571</b>
<b>Utah BLM</b>	<b>Steve Madsen</b>	<b>steve_c_madsen@blm.gov</b>	<b>801-539-4058</b>
<b>UDWR</b>	<b>Dr. Jim Parrish</b>	<b>jimparrish@utah.gov</b>	<b>801-538-4788</b>
<b>UDWR</b>	<b>Brian Maxfield</b>	<b>brianmaxfield@utah.gov</b>	<b>435-790-5355</b>
<b>USFWS</b>	<b>Laura Romin</b>	<b>laura_romin@usfws.gov</b>	<b>801-975-3330</b>
<b>USFWS</b>	<b>Diana Whittington</b>	<b>diana_whittington@usfws.gov</b>	<b>801-975-3330</b>
<b>U.S. Forest Service</b>	<b>Chris Colt</b>	<b>ccolt@fs.fed.us</b>	<b>801-896-1062</b>
<b>HawkWatch International</b>	<b>Jeff Smith</b>	<b>jsmith@hawkwatch.org</b>	<b>801-484-6808</b>

#### **ATTACHMENT 4: REFERENCES CITED**

Code of Federal Regulations, 43 CFR 3101.1-2, Leasing Regulations.

Endangered Species Act (ESA), 16 U.S.C. 1513-1543.

Migratory Bird Treaty Act (MBTA), 16 U.S.C. 703-712.

Romin, Laura A., and James A. Muck. 2002. *Utah Field Office Guidelines for Raptor Protection From Human and Land Use Disturbances*. U.S. Department of the Interior, U.S. Fish and Wildlife Service, Utah Field Office, Salt Lake City, Utah.

U.S. Department of the Interior, Bureau of Land Management. 1997. Standards for Rangeland Health and Guidelines for Grazing Management on BLM Lands in Utah.

U.S. Department of the Interior, Bureau of Land Management, 6840 Manual.

## **APPENDIX 3—SURFACE STIPULATIONS APPLICABLE TO OIL AND GAS LEASING AND OTHER SURFACE DISTURBING ACTIVITIES**

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This appendix lists surface stipulations for oil and gas leasing in the Approved Resource Management Plan (RMP). These surface stipulations will also apply, where appropriate and practical, to other surface disturbing activities (and occupancy) associated with land use authorizations, permits, and leases issued on Bureau of Land Management (BLM) lands. The stipulations will not apply to other activities and uses where they are contrary to laws, regulations, or policy for specific land use authorizations. The intent is to manage other activities and uses as consistent as possible with oil and gas leasing.

Surface disturbing activities are those that normally result in more than negligible disturbance to public lands. These activities normally involve disturbance to soils and vegetation to the extent that reclamation is required. They include, but are not limited to, the use of mechanized earth-moving equipment; truck-mounted drilling equipment; geophysical exploration; off-road vehicle travel in areas designated as limited or closed to off-highway vehicle (OHV) use; placement of surface facilities such as utilities, pipelines, structures, and oil and gas wells; new road construction; and use of pyrotechnics, explosives, and hazardous chemicals. Surface disturbing activities will not include livestock grazing, cross-country hiking, driving on designated routes, and minimum impact filming permits.

### **DESCRIPTION OF SURFACE STIPULATIONS**

Table A0-1 shows resources of concern and stipulations including exceptions, modifications, and waivers. Three surface stipulations could be applied to land use authorizations: (1) no surface occupancy (NSO), (2) timing limitations (TL), and (3) controlled surface use (CSU).

Areas identified as NSO (major constraints) will be closed to surface disturbing activities. NSO areas would be avoidance areas for rights-of-way (ROW) and where necessary will be recommended for withdrawal from operations under the mining laws (locatable minerals) to prevent unacceptable resource impacts. An NSO stipulation cannot be applied to locatable minerals without a withdrawal. A withdrawal is not a land use planning decision because it must be approved by the Secretary of the Interior.

Areas identified as TL (moderate constraints) will be closed to surface disturbing activities during identified time frames. TL areas will be open to operational and maintenance activities, including associated vehicle travel, during the closed period unless otherwise specified in the stipulation.

Areas identified as CSU (moderate constraints) will require proposals to be authorized only according to the controls or constraints specified. The controls will be applicable to all surface disturbing activities.

## **EXCEPTIONS, MODIFICATIONS, AND WAIVERS**

Surface stipulations could be excepted, modified, or waived by the authorized officer. An exception exempts the holder of the land use authorization document from the stipulation on a one-time basis. A modification changes the language or provisions of a surface stipulation, either temporarily or permanently. A waiver permanently exempts the surface stipulation. The environmental analysis document prepared for site-specific proposals such as oil and gas development (i.e., applications for permit to drill [APD] or sundry notices) also would need to address proposals to exempt, modify, or waive a surface stipulation. To exempt, modify, or waive a stipulation, the environmental analysis document would have to show that (1) the circumstances or relative resource values in the area had changed following issuance of the lease, (2) less restrictive requirements could be developed to protect the resource of concern, and (3) operations could be conducted without causing unacceptable impacts.

## **STANDARD TERMS AND CONDITIONS**

All surface disturbing activities are subject to standard terms and conditions. These include the stipulations that are required for proposed actions in order to comply with the Endangered Species Act (ESA). Standard terms and conditions for oil and gas leasing provide for relocation of proposed operations up to 200 meters and for prohibiting surface disturbing operations for a period not to exceed 60 days. The stipulations addressed in Table A0-1 that are within the parameters of 200 meters and 60 days are considered open to oil and gas leasing subject to standard terms and conditions.

## **CLOSED AREAS**

Areas identified as closed are not available for oil and gas leasing. Areas where restrictions apply to all surface disturbing activities are noted with an asterisk.

**Table A0-1. Proposed RMP Surface Stipulations and Exception, Modification, and Waiver Criteria**

Stipulation Code	Resource of Concern	Applicable Area	Stipulation Description
Closed	Recreation	Paria Special Recreation Management Area (SRMA) – Canyon Recreation Management Zone (RMZ) and Uplands RMZ	<p>The Paria SRMA (Canyon RMZ and Uplands RMZ) is in the Paria Canyon Wilderness Area, which is closed to oil and gas leasing.</p> <p>Purpose: To protect recreational values such as world-class wilderness trekking, adventure, viewing deeply entrenched slickrock canyon, and associated slot canyon features.</p> <p>Exception: None</p> <p>Modification: None</p> <p>Waiver: None</p>
Closed	Recreation	Moquith Mountain SRMA – Dunes RMZ	<p>The Moquith Mountain SRMA – Dunes RMZ will be closed to oil and gas leasing.</p> <p>Purpose: To protect unique, scenic, and expansive sand dunes OHV opportunities.</p> <p>Exception: None</p> <p>Modification: None</p> <p>Waiver: None</p>
Closed	Recreation	North Fork Virgin River SRMA	<p>The North Fork Virgin River SRMA will be closed to oil and gas leasing.</p> <p>Purpose: To protect spectacular, primitive riparian canyon travel with abundant geologic formations and diverse flora and fauna.</p> <p>Exception: None</p> <p>Modification: None</p> <p>Waiver: None</p>
Closed	Recreation	Orderville Canyon SRMA	<p>The Orderville Canyon SRMA is entirely within the WSA and will be closed to leasing.</p> <p>Purpose: To protect spectacular, primitive riparian canyon travel with abundant geologic formations and diverse flora and fauna.</p> <p>Exception: None</p> <p>Modification: None</p> <p>Waiver: None</p>

Closed	Wild and Scenic Rivers	Suitable "wild" river corridors	<p>Manage river segments found suitable and classified as "wild" as closed to oil and gas leasing within ¼ mile of each side of the river or the viewshed from the river, whichever is less.</p> <p>Purpose: To protect the tentative classification and outstandingly remarkable values (ORV).</p> <p>Exception: None</p> <p>Modification: None</p> <p>Waiver: None</p>
Closed	Wilderness area	Paria Canyon–Vermilion Cliffs Wilderness area	<p>The designated Paria Canyon Wilderness area is closed to oil and gas leasing.</p> <p>Purpose: To protect wilderness values.</p> <p>Exception: None</p> <p>Modification: None</p> <p>Waiver: None</p>
Closed	Wilderness Study Area (WSA)	<p>North Fork Virgin River</p> <p>Orderville Canyon</p> <p>Parunuweap Canyon</p> <p>Canaan Mountain</p> <p>Moquith Mountain</p>	<p>Areas within WSAs are closed to oil and gas leasing.</p> <p>Purpose: To protect wilderness values.</p> <p>Exception: None</p> <p>Modification: None</p> <p>Waiver: None</p>
Major (NSO)	ACEC	Cottonwood Canyon ACEC	<p>The Cottonwood Canyon ACEC, which includes the existing Water Canyon/South Fork Indian Canyon ACEC, will be open to leasing subject to major constraints (NSO).</p> <p>Purpose: To protect relevant and important (R&amp;I) values, including scenic and cultural values and the Fredonia water supply.</p> <p>Exception: An exception could be authorized if the use is consistent and compatible with protection or enhancement of the resource values or would provide suitable opportunities for public enjoyment of these resources.</p> <p>Modification: None</p> <p>Waiver: None</p>

Major (NSO)	Cultural Resources	Sites listed on the National Register of Historic Places	<p>Sites listed on the National Register of Historic Places will be open to leasing subject to major constraints (NSO).</p> <p>Purpose: To protect sites listed on the National Register of Historic Places for the purposes for which they were listed.</p> <p>Exception: An exception could be authorized if the use is consistent and compatible with protection or enhancement of the resource values or would provide suitable opportunities for public enjoyment of these resources.</p> <p>Modification: None</p> <p>Waiver: None</p>
Major (NSO)	Cultural Resources*	Within ¼ mile or within the visual horizon, whichever is closer, of cultural sites where the landscape features are important in understanding the property or sites where setting directly contributes to the significance of the property	<p>Cultural sites within ¼ mile or within the visual horizon, whichever is closer, will be open to leasing subject to major constraints (NSO).</p> <p>Purpose: To protect cultural sites where the landscape features are important in understanding the property or sites where the setting directly contributes to the significance of the property.</p> <p>Exception: An exception could be authorized if the use is consistent and compatible with protection or enhancement of the resource values or would provide suitable opportunities for public enjoyment of these resources.</p> <p>Modification: None</p> <p>Waiver: None</p>
Major (NSO)	Fish and Wildlife	Within 1 mile of condor nest sites	<p>Preclude placement of permanent structures or roads within 1 mile of condor nest sites.</p> <p>Purpose: To protect condor nest sites.</p> <p>Exception: An exception could be granted if surveys determine that California condor communal roosting or nesting areas are not occupied.</p> <p>Modification: The Field Manager may modify the boundaries of the stipulation area if portions of the area do not include habitat or are outside the current defined area, as determined by the BLM.</p> <p>Waiver: A waiver may be granted if it is determined the habitat no longer exists or has been destroyed.</p>
Major (NSO)	Lands and Realty	R&PP Leases	<p>The areas with Recreation and Public Purposes (R&amp;PP) leases will be open to leasing subject to major constraints (NSO).</p> <p>Purpose: To protect the purposes for which the R&amp;PP leases were established.</p> <p>Exception: An exception could be authorized if the use is consistent and compatible with protection or enhancement of the resource values or would provide suitable opportunities for public enjoyment of these resources.</p> <p>Modification: None</p> <p>Waiver: None</p>

Major (NSO)	Lands and Realty	Cemeteries	<p>Cemeteries will be open to leasing subject to major constraints (NSO).</p> <p>Purpose: To protect cemeteries for the purposes they were established and to eliminate potential safety issues and surface use conflicts.</p> <p>Exception: An exception could be authorized if the use is consistent and compatible with protection or enhancement of the resource values or would provide suitable opportunities for public enjoyment of these resources.</p> <p>Modification: None</p> <p>Waiver: None</p>
Major (NSO)	Lands and Realty	Landfills (existing and closed)	<p>Existing and closed landfills will be open to leasing subject to major constraints (NSO).</p> <p>Purpose: To eliminate potential safety issues and surface use conflicts.</p> <p>Exception: An exception could be granted if it can be demonstrated that the action would not result in any surface use conflicts.</p> <p>Modification: None</p> <p>Waiver: None</p>
Major (NSO)	Lands and Realty	Incorporated Municipalities	<p>Incorporated municipalities will be open to leasing subject to major constraints (NSO).</p> <p>Purpose: To eliminate potential safety issues and surface use conflicts.</p> <p>Exception: An exception could be granted if it can be demonstrated that the action would not result in any surface use conflicts.</p> <p>Modification: None</p> <p>Waiver: None</p>
Major (NSO)	Lands and Realty	Airports	<p>Airports will be open to leasing subject to major constraints (NSO).</p> <p>Purpose: To eliminate potential safety issues and surface use conflicts.</p> <p>Exception: An exception could be granted if it can be demonstrated that the action would not result in any surface use conflicts.</p> <p>Modification: None</p> <p>Waiver: None</p>
Major (NSO)	Minerals and Energy	Federal facilities	<p>Federal facilities will be open to leasing subject to major constraints (NSO).</p> <p>Purpose: To protect federal investment in facilities and to eliminate potential safety issues and surface use conflicts.</p> <p>Exception: An exception could be granted if it can be demonstrated that the action would not result in any surface use conflicts.</p> <p>Modification: None</p> <p>Waiver: None</p>

Major (NSO)	Recreation	Developed recreation sites	<p>Developed recreation sites will be open to leasing subject to major constraints (NSO).                  Purpose: To protect federal investment in facilities, provide for recreational use, and protect the viewshed from the facility.                  Exception: An exception could be granted if a viewshed analysis indicates there would be no impairment of the visual resources from the recreation site. Also, an exception could be authorized if the use is consistent and compatible with protection or enhancement of the resource values or would provide suitable opportunities for public enjoyment of the applicable resources.                  Modification: None                  Waiver: None</p>
Major (NSO)	Recreation	Kanab Community SRMA – OHV RMZ	<p>The Kanab Community SRMA – OHV RMZ will be open to leasing subject to major constraints (NSO).                  Purpose: To protect close-to-town OHV travel in an exceptionally scenic setting with a variety of trails for different skill levels.                  Exception: An exception could be authorized if the use is consistent and compatible with protection or enhancement of the resource values, would provide a public benefit, or would provide suitable opportunities for public enjoyment of the resources.                  Modification: None                  Waiver: None</p>
Major (NSO)	Recreation	Kanab Community SRMA – Non-Motorized RMZ	<p>The Kanab Community SRMA – Non-Motorized RMZ will be open to leasing subject to major constraints (NSO).                  Purpose: To protect town-accessible hiking and an equestrian trail network offering outstanding views and varied terrain.                  Exception: An exception could be authorized if the use is consistent and compatible with protection or enhancement of the resource values, would provide a public benefit, or would provide suitable opportunities for public enjoyment of the resources.                  Modification: None                  Waiver: None</p>

Major (NSO)	Recreation	Moquith Mountain SRMA – Non-Dunes Wooded RMZ – OUTSIDE WSA	<p>The Moquith Mountain SRMA – Non-Dunes Wooded RMZ (outside the WSA) will be open to leasing subject to major constraints (NSO).</p> <p>Purpose: To protect a scenic and extensive OHV trail network accessing vistas, overlooks, flora and fauna, and cultural sites.</p> <p>Exception: An exception could be authorized if the use is consistent and compatible with protection or enhancement of the resource values, would provide a public benefit, or would provide suitable opportunities for public enjoyment of the resources.</p> <p>Modification: None</p> <p>Waiver: None</p>
Major (NSO)	Special Status Species	Within ½ mile radius of a Greater sage-grouse lek site	<p>Manage oil and gas leasing as open subject to major constraints (NSO) within ½ mile of a Greater sage-grouse lek site.</p> <p>Purpose: To protect occupied lek sites within Greater sage-grouse habitat.</p> <p>Exception: An exception may be granted by the Field Manager if the operator submits a plan that demonstrates that impacts from the proposed action can be adequately mitigated.</p> <p>Modification: The Field Manager may modify the boundaries of the stipulation area if (1) portions of the area do not include lek sites, (2) the lek site(s) have been completely abandoned or destroyed, or (3) occupied lek site(s) occur outside the current defined area, as determined by the BLM.</p> <p>Waiver: A waiver may be granted if there are no active lek site(s) in the leasehold and it is determined the site(s) have been completely abandoned or destroyed or occur outside current defined area, as determined by the BLM.</p>
Major (NSO)	Special Status Species*	Within ½ mile of active bald eagle nest sites year-round	<p>Areas within ½ mile of active bald eagle nest sites will be managed as open to leasing subject to major constraints (NSO).</p> <p>Purpose: To protect active bald eagle nest sites.</p> <p>Exception: An exception may be granted by the Field Manager if authorization is obtained from USFWS (through applicable provisions of the ESA). The Field Manager may also grant an exception if an environmental analysis indicates that the nature of the conduct of the actions, as proposed or conditioned, would not impair the primary constituent element determined necessary for the survival and recovery of the bald eagles and USFWS concurs with this determination.</p> <p>Modification: The Field Manager may modify the boundaries of the stipulation area if an environmental analysis indicates and USFWS determines (through applicable provisions of the ESA) that a portion of the area is not being used as bald eagle nesting territory.</p> <p>Waiver: May be granted if bald eagles are de-listed and if USFWS determines it is not necessary to protect nesting territories according to the ESA and the Bald Eagle Protection Act or if there is no reasonable likelihood of site occupancy over a minimum 10-year period.</p>

Major (NSO)	Special Status Species*	Within ½ mile of active, suitable, or potential reintroduction Utah prairie dog habitats/sites	<p>Areas within ½ mile of active, suitable, or potential reintroduction Utah prairie dog habitats/sites will be managed as open to leasing subject to major constraints (NSO).</p> <p>Purpose: To protect active, suitable, or potential reintroduction Utah prairie dog habitats/sites.</p> <p>Exception: An exception may be granted if the applicant submits a plan that indicates that impacts of the proposed action can be adequately mitigated, or, if due to the size of the town there is no reasonable location to develop a lease and avoid colonies, the Field Manager will allow for loss of prairie dog colonies and/or habitat to satisfy terms and conditions of the lease.</p> <p>Modification: The Field Manager may modify the boundaries of the stipulation area if portions of the area do not include prairie dog habitat or active colonies are found outside current defined area, as determined by the BLM.</p> <p>Waiver: A waiver may be granted if in the leasehold it is determined that habitat no longer exists or has been destroyed.</p>
Major (NSO)	Special Status Species*	Within ½ mile around Mexican spotted owl nests	<p>Areas within ½ mile around Mexican spotted owl (MSO) nests will be managed as open to leasing subject to major constraints (NSO).</p> <p>Purpose: To protect MSO nests.</p> <p>Exception: An exception may be granted by the Field Manager if concurrence is obtained from USFWS (through applicable provisions of the ESA). The Field Manager may also grant an exception if an environmental analysis indicates that the nature or conduct of the actions would not impair the primary constituent element determined necessary for the survival and recovery of the MSO and USFWS concurs with this determination.</p> <p>Modification: The Field Manager may modify the boundaries of the stipulation area if an environmental analysis indicates and USFWS determines (through applicable provisions of the ESA) that a portion of the area is not being used as critical habitat.</p> <p>Waiver: A waiver may be granted if the MSO is de-listed and the critical habitat is determined by USFWS as not necessary for the survival and recovery of the MSO.</p>
Major (NSO)	Vegetation	Relict Vegetation (Diana's Throne and Elephant Butte)	<p>Restrict surface occupancy (NSO) for surface disturbing activities to protect relict vegetation at Diana's Throne and Elephant Butte.</p> <p>Purpose: To protect relict vegetation at Diana's Throne and Elephant Butte.</p> <p>Exception: Exceptions could be allowed if the use is consistent and compatible with protection or enhancement of the resource values or would provide suitable opportunities for public enjoyment of these resources.</p> <p>Modification: None</p> <p>Waiver: None</p>

Major (NSO)	Water*	Within 330 feet of riparian areas	<p>Do not allow new surface disturbing activities within 330 feet of riparian/wetland areas.</p> <p>Purpose: To protect riparian areas.</p> <p>Exception: An exception could be authorized if (a) there are no practical alternatives, (b) all long-term impacts could be fully mitigated, or (c) the activity would benefit and enhance the riparian area.</p> <p>Modification: None</p> <p>Waiver: None</p>
Major (NSO)	Wild and Scenic Rivers	Suitable "scenic" river corridors	<p>Manage oil and gas leasing as open subject to major constraints (NSO) in the East Fork Virgin River segment 37-40a suitable "scenic" river segment (within ¼ mile of each side of the river or the viewshed from river, whichever is less).</p> <p>Purpose: To protect the tentative classification and ORVs.</p> <p>Exception: An exception could be authorized if the activity would benefit and enhance the tentative classification and ORVs.</p> <p>Modification: None</p> <p>Waiver: None</p>
Major (NSO)	Wild and Scenic Rivers	Suitable wild and scenic river "recreational" segment East Fork Virgin River (segment 36-37) – OUTSIDE THE WSA	<p>Manage oil and gas leasing as open subject to major constraints (NSO) in the East Fork Virgin River segment 36-37 suitable "recreational" river segment (within ¼ mile of each side of the river or the viewshed from river, whichever is less).</p> <p>Purpose: To protect the tentative classification and ORVs.</p> <p>Exception: An exception could be authorized if the activity would benefit and enhance the tentative classification and ORVs.</p> <p>Modification: None</p> <p>Waiver: None</p>
Moderate (CSU)	Soil	Fragile soils areas	<p>Develop and implement site-specific restrictions and/or mitigations for activities proposed in fragile soil areas on a case-by-case basis. The BLM must approve surface disturbing activities before construction and maintenance would be authorized.</p> <p>Allow surface disturbance in fragile soil areas as long as impacts would be mitigated or disturbance would be beneficial to rangeland health.</p> <p>Purpose: To protect fragile soil resources.</p> <p>Exception: An exception could be authorized if the use is consistent and compatible with long-term protection or enhancement of soil resource values.</p> <p>Modification: None</p> <p>Waiver: None</p>

<p>Moderate (CSU)</p>	<p>Special Status Species</p>	<p>Federally listed and candidate plant species occupied and suitable habitat</p>	<p>Manage oil and gas leasing as open subject to moderate constraints (CSU) in federally listed and candidate plant species-occupied and suitable habitat. In these areas, well placement would be located to not adversely affect the species or its habitat.                  Purpose: To protect federally listed and candidate plant species-occupied and suitable habitat.                  Exception: None                  Modification: If federally listed and candidate plant species are not identified in the habitat, development could occur, but site-specific mitigation requirements could be included in the application for permit to drill.                  Waiver: None</p>
<p>Moderate (CSU)</p>	<p>Visual Resources</p>	<p>VRM Class II areas</p>	<p>Surface disturbing activities must meet the objectives of Visual Resource Management (VRM) Class II.                  Purpose: To protect high-quality visual resources.                  Exception: The level of change to the landscape should be low; management activities may be seen, but should not attract the attention of the casual observer. Any change to the landscape must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape. Surface disturbing activities that are determined to be compatible and consistent with the protection or enhancement of the resource values are exempted. Also, recognized utility corridors are exempted only for utility projects, which would be managed according to VRM Class III objectives.                  Modification: None                  Waiver: None</p>
<p>Moderate (CSU)</p>	<p>Water</p>	<p>Culinary water supply in the following areas:                  T 42 S R 6 W Sections 19, 31                  T 42 S R 7 W Sections 23, 24, 25, 26, 27, 34, 35</p>	<p>Manage oil and gas leasing as open to leasing subject to moderate constraints to protect culinary water supply as directed by the Land Use Agreement for Kanab City Existing Wells in the following sections:                  T 42 S R 6 W Sections 19, 31                  T 42 S R 7 W Sections 23, 24, 25, 26, 27, 34, 35                  In these areas (1) well placement would be located to eliminate potential contamination sources or pollution sources and/or (2) design standards would be implemented to prevent contaminated discharges to ground water.                  Purpose: To protect culinary water supply as directed by the Land Use Agreement for Kanab City Existing Wells.                  Exception: If federally listed and candidate plant species are not identified in the habitat, there would be no restrictions.                  Modification: None                  Waiver: None</p>

<p>Moderate (TL)</p>	<p>Fish and Wildlife</p>	<p>Identified big game migration and transitional ranges from October 1 to November 15</p>	<p>Preclude oil and gas development and ROW construction/reconstruction in identified big game migration and transitional ranges from October 1 to November 15.                      Purpose: To minimize disturbance within identified big game migration and transitional ranges.                      Exception: The Field Manager may grant an exception if the operator submits a plan that demonstrates that impacts from the proposed action can be adequately mitigated.                      Modification: The Field Manager may modify the boundaries of the stipulation area if a portion of the area is (1) not being used as big game migration and transitional ranges and (2) if habitat is being used outside of stipulation boundaries for big game migration and transitional ranges and needs to be protected.                      Waiver: A waiver may be granted if the habitat is determined to be unsuitable for big game migration and transitional ranges and there is no reasonable likelihood of future use as big game migration and transitional ranges.</p>
<p>Moderate (TL)</p>	<p>Fish and Wildlife*</p>	<p>Crucial mule deer and elk winter range from November 15 to April 15</p>	<p>Preclude surface disturbing activities in crucial mule deer and elk winter range from November 15 to April 15 unless the activity would improve mule deer or elk habitat.                      Purpose: To minimize stress and disturbance to deer and elk during critical winter months.                      Exception: This stipulation does not apply to the maintenance and operation of existing and ongoing facilities. An exception may be granted by the Field Manager if the operator submits a plan that demonstrates that impacts from the proposed action can be adequately mitigated or it is determined the habitat is not being used during the winter period for any given year.                      Modification: The Field Manager may modify the boundaries of the stipulation area if (1) a portion of the area is not being used as crucial winter range by deer/elk, (2) habitat outside of stipulation boundaries is being used as crucial winter range and needs to be protected, or (3) the migration patterns have changed causing a difference in the season of use.                      Waiver: A waiver may be granted if the winter range habitat is unsuitable or unoccupied during winter months by deer/elk and there is no reasonable likelihood of future winter range use.</p>

<p>Moderate (TL)</p>	<p>Fish and Wildlife*</p>	<p>Crucial Desert bighorn sheep habitat from April 15 to June 15 during lambing season</p>	<p>Preclude surface disturbing activities in crucial Desert bighorn sheep habitat during lambing season (April 15 through June 15).                  Purpose: To minimize disturbance within crucial Desert bighorn sheep habitat during lambing season.                  Exception: The Field Manager may grant an exception if the operator submits a plan that demonstrates that impacts from the proposed action can be adequately mitigated.                  Modification: The Field Manager may modify the boundaries of the stipulation area (1) if a portion of the area is not being used as crucial Desert bighorn sheep habitat during lambing season or (2) if habitat outside of stipulation boundaries is being used for crucial Desert bighorn sheep habitat and needs to be protected.                  Waiver: A waiver may be granted if the habitat is determined to be unsuitable for crucial Desert bighorn sheep habitat and there is no reasonable likelihood of future use as crucial Desert bighorn sheep habitat.</p>
<p>Moderate (TL)</p>	<p>Fish and Wildlife*</p>	<p>Crucial pronghorn habitat from May 15 to June 15 during fawning season</p>	<p>Preclude surface disturbing activities in crucial pronghorn habitat from May 15 through June 15 during fawning season.                  Purpose: To minimize disturbance within crucial pronghorn habitat during fawning season.                  Exception: The Field Manager may grant an exception if the operator submits a plan that demonstrates that impacts from the proposed action can be adequately mitigated.                  Modification: The Field Manager may modify the boundaries of the stipulation area (1) if a portion of the area is not being used as crucial pronghorn habitat during fawning season or (2) if habitat outside of stipulation boundaries is being used for crucial pronghorn habitat and needs to be protected.                  Waiver: A waiver may be granted if the habitat is determined as unsuitable for crucial pronghorn habitat and there is no reasonable likelihood of future use as crucial pronghorn habitat.</p>

<p>Moderate (TL)</p>	<p>Fish and Wildlife*</p>	<p>Prohibit disruptive activities within 1 mile of Peregrine falcon nest sites from February 1 to August 31</p>	<p>Prohibit disruptive activities within 1 mile of Peregrine falcon nest sites from February 1 to August 31.                  Purpose: To protect Peregrine falcon nest sites.                  Exception: An exception could be granted if surveys determine that nesting sites are not occupied. During years when a nest site is unoccupied before May 30, the seasonal limitation may be suspended. It may also be suspended once young have fledged and dispersed from the nest.                  Modification: The Field Manager may modify the boundaries of the stipulation area if portions of the area do not include habitat or are outside the current defined area, as determined by the BLM. Dates could be adjusted by local Utah Division of Wildlife Resources (UDWR) and BLM biologists based on local knowledge of nesting chronology of raptors.                  Waiver: A waiver may be granted if it is determined that the habitat no longer exists, has been destroyed, or there is no reasonable likelihood of future use.</p>
<p>Moderate (TL)</p>	<p>Fish and Wildlife*</p>	<p>Prohibit disruptive activities to nesting raptors within ½ mile of a raptor nest for the protection of raptor nesting areas</p>	<p>Prohibit disruptive activities to nesting raptors within ½ mile of a raptor nest during the following time periods for the protection of raptor nesting areas:                  Jan 1–Aug 31: golden eagle                  Mar 15–Aug 15: red-tailed hawk                  Mar 15–Aug 31: Cooper’s hawk, sharp-shinned hawk                  Mar 1–Aug 31: Swainson’s hawk                  Apr 1–Aug 15: Northern harrier                  Apr 1–Aug 31: merlin, osprey                  May 1–Aug 15: Turkey vulture                  Purpose: To protect raptor nesting areas.                  Exception: An exception could be granted if surveys determine that nesting sites are not occupied. During years when a nest site is unoccupied before May 30, the seasonal limitation may be suspended. It may also be suspended once young have fledged and dispersed from the nest.                  Modification: The Field Manager may modify the boundaries of the stipulation area if portions of the area do not include habitat or are outside the current defined area, as determined by the BLM. Dates could be adjusted by local UDWR and BLM biologists based on local knowledge of nesting chronology of raptors.                  Waiver: A waiver may be granted if it is determined that the habitat no longer exists, has been destroyed, or there is no reasonable likelihood of future use.</p>

<p>Moderate (TL)</p>	<p>Fish and Wildlife*</p>	<p>Prohibit disruptive activities to nesting raptors within ¼ mile of a raptor nest for the protection of raptor nesting areas</p>	<p>Prohibit disruptive activities to nesting raptors within ¼ mile of a raptor nest during the following time periods for the protection of raptor nesting areas:                  Dec 1–Sep 31: Great horned owl                  Feb 1–Jul 31: Boreal owl                  Feb 1–Aug 15: Long-eared owl                  Mar 1–Aug 15: W. Screech owl                  Mar 1–Aug 31: N. saw-whet owl                  Apr 1–Aug 1: N. Pygmy owl                  Apr 1–Aug 31: Prairie falcon                  Apr 1–Sep 30: Flammulated owl                  Purpose: To protect raptor nesting areas.                  Exception: An exception could be granted if surveys determine that nesting sites are not occupied. During years when a nest site is unoccupied before May 30, the seasonal limitation may be suspended. It may also be suspended once young have fledged and dispersed from the nest.                  Modification: The Field Manager may modify the boundaries of the stipulation area if portions of the area do not include habitat or are outside the current defined area, as determined by the BLM. Dates could be adjusted by local UDWR and BLM biologists based on local knowledge of nesting chronology of raptors.                  Waiver: A waiver may be granted if it is determined that the habitat no longer exists, has been destroyed, or there is no reasonable likelihood of future use.</p>
<p>Moderate (TL)</p>	<p>Recreation</p>	<p>Escalante SRMA – Close seasonally from May 1 to September 30</p>	<p>Open to leasing subject to moderate constraints (timing limitation stipulation from May 1 to September 30).                  Purpose: To protect town-accessible hiking/equestrian trail network offering outstanding views and varied terrain.                  Exception: An exception could be authorized if the use is consistent and compatible with protection or enhancement of the resource values or would provide a public benefit or suitable opportunities for public enjoyment of the resources.                  Modification: None                  Waiver: None</p>

<p>Moderate (TL)</p>	<p>Special Status Species</p>	<p>Preclude disruptive activities within 1 mile of a California condor nest site during breeding season</p>	<p>Preclude disruptive activities within 1 mile of a California condor nest site during the breeding season. Preclude placement of permanent structures or roads within 1 mile of condor nest sites.                      Purpose: To protect California condor communal roosting or nesting areas.                      Exception: An exception could be granted if surveys determine that California condor communal roosting or nesting areas are not occupied.                      Modification: The Field Manager may modify the boundaries of the stipulation area if portions of the area do not include habitat or are outside the current defined area, as determined by the BLM.                      Waiver: A waiver may be granted if it is determined that the habitat no longer exists or has been destroyed.</p>
<p>Moderate (TL)</p>	<p>Special Status Species*</p>	<p>Restrict activities or habitat alterations that may disturb nesting bald eagles from January 1 to August 31 within 1 mile of bald eagle nest sites</p>	<p>Restrict activities or habitat alterations that may disturb nesting bald eagles from January 1 to August 31 within 1 mile of bald eagle nest sites.                      Purpose: To protect active bald eagle nest sites.                      Exception: An exception may be granted by the Field Manager if authorization is obtained from USFWS (through applicable provisions of the ESA). The Field Manager may also grant an exception if an environmental analysis indicates that the nature of the conduct of the actions, as proposed or conditioned, would not impair the primary constituent element determined necessary for the survival and recovery of the bald eagles and USFWS concurs with this determination. An exception may be granted by the Field Manager where no nesting behavior is initiated prior to June 1.                      Modification: The Field Manager may modify the boundaries of the stipulation area if an environmental analysis indicates and USFWS determines (through applicable provisions of the ESA) that a portion of the area is not being used as bald eagle nesting territories.                      Waiver: A waiver may be granted if bald eagles are de-listed and if USFWS determines it is not necessary to protect nesting territories according to the ESA and the Bald Eagle Protection Act or if there is no reasonable likelihood of site occupancy over a minimum 10-year period.</p>

<p>Moderate (TL)</p>	<p>Special Status Species*</p>	<p>Restrict activities or habitat alterations that may disturb bald eagles within ½ mile of known winter concentration areas from November 1 to March 31</p>	<p>Restrict activities or habitat alterations that may disturb bald eagles within ½ mile of known winter concentration areas from November 1 to March 31. In addition, where daily activities must occur within these spatial buffers, and are approved through subsequent consultation with USFWS, activities should be scheduled to occur after 9 a.m. and terminate at least 1 hour before official sunset to ensure that bald eagles using these roosts are allowed the opportunity to vacate their roost in the morning and return undisturbed in the evening.</p> <p>Purpose: To protect active bald eagle winter concentration areas.</p> <p>Exception: An exception may be granted by the Field Manager if authorization is obtained from USFWS (through applicable provisions of the ESA). The Field Manager may also grant an exception if an environmental analysis indicates that the nature of the conduct of the actions, as proposed or conditioned, would not impair the primary constituent element determined necessary for the survival and recovery of the bald eagles and USFWS concurs with this determination.</p> <p>Modification: The Field Manager may modify the boundaries of the stipulation area if an environmental analysis indicates and USFWS determines (through applicable provisions of the ESA) that a portion of the area is not being used as bald eagle winter concentration area.</p> <p>Waiver: A waiver may be granted if bald eagles are de-listed and if USFWS determines it is not necessary to protect nesting territories according to the ESA and the Bald Eagle Protection Act or if there is no reasonable likelihood of site occupancy over a minimum 10-year period.</p>
<p>Moderate (TL)</p>	<p>Special Status Species*</p>	<p>Prohibit surface disturbing activities within ½ mile around special status raptor species nest sites Prohibit surface disturbing activities within ¼ mile around special status raptor species nest sites</p>	<p>Prohibit surface disturbing activities within ½ mile around special status raptor species nest sites during the following time periods: Mar 1–Aug 1: Ferruginous hawk Mar 1–Aug 15: N. Goshawk Prohibit surface disturbing activities within ¼ mile around special status raptor species nest sites during the following time periods: Mar 1–Aug 1: Short-eared owl Mar 1–Aug 31: Burrowing owl</p> <p>Purpose: To protect raptor habitat.</p> <p>Exception: An exception could be granted if surveys determine that nesting sites are not occupied.</p> <p>Modification: The Field Manager may modify the boundaries of the stipulation area if portions of the area do not include habitat or are outside the current defined area, as determined by the BLM.</p> <p>Waiver: A waiver may be granted if it is determined the habitat no longer exists or has been destroyed.</p>

<p>Moderate (TL)</p>	<p>Special Status Species*</p>	<p>Permit no surface disturbing activities from March 1 to August 31 in Mexican spotted owl protected activity centers (PAC), breeding habitats, or designated critical habitat</p>	<p>Permit no surface disturbing activities or surface occupancy within ½ mile around MSO nests to protect the species from disturbance. Permit no surface disturbing activities from March 1 to August 31 in PACs, breeding habitats, or designated critical habitat to avoid disturbance to breeding MSOs. If the action occurs entirely outside of the MSO breeding season (March 1 to August 31) and leaves no permanent structure or permanent habitat disturbance, the action may proceed without an occupancy survey. If action would occur during the season restriction (March 1 to August 31), surveys according to USFWS protocol for MSO would be required prior to commencement of activities, and if owls are detected, the BLM would reinstate Section 7 consultation with USFWS.</p> <p>Purpose: To protect MSO nests.</p> <p>Exception: An exception could be granted if surveys determine that MSO nest areas are not occupied.</p> <p>Modification: The Field Manager may modify the boundaries of the stipulation area if portions of the area do not include habitat or are outside the current defined area, as determined by the BLM.</p> <p>Waiver: A waiver may be granted if it is determined the habitat no longer exists or has been destroyed.</p>
<p>Moderate (TL)</p>	<p>Special Status Species*</p>	<p>Prohibit surface disturbing activities within ¼ mile of occupied Southwestern willow flycatcher breeding habitat from May 1 through August 15</p>	<p>Prohibit surface disturbing activities within ¼ mile of occupied Southwestern willow flycatcher breeding habitat from May 1 to August 15.</p> <p>Purpose: To protect Southwestern willow flycatcher breeding habitat.</p> <p>Exception: An exception could be granted if surveys determine that the Southwestern willow flycatcher breeding habitat is not occupied.</p> <p>Modification: The Field Manager may modify the boundaries of the stipulation area if portions of the area do not include habitat or are outside the current defined area, as determined by the BLM.</p> <p>Waiver: A waiver may be granted if it is determined the habitat no longer exists or has been destroyed.</p>

<p>Moderate (TL)</p>	<p>Special Status Species*</p>	<p>Prohibit surface disturbing activities within 2 miles of a Greater sage-grouse lek in the nesting and brood-rearing habitat from March 15 to July 15</p>	<p>Allow no surface disturbing or otherwise disruptive activities (e.g., construction and maintenance) within 2 miles of a Greater sage-grouse lek in nesting and brood-rearing habitat from March 15 to July 15.</p> <p>Purpose: To protect Greater sage-grouse lek in nesting and brood-rearing habitat.</p> <p>Exception: An exception could be granted if surveys determine that the Greater sage-grouse lek in nesting and brood-rearing habitat is not occupied. An exception may also be granted by the Field Manager if the operator submits a plan that demonstrates that impacts from the proposed action can be adequately mitigated or it is determined the lek sites are not active.</p> <p>Modification: The Field Manager may modify the boundaries of the stipulation area if portions of the area do not include habitat or are outside the current defined area, as determined by the BLM.</p> <p>Waiver: A waiver may be granted if it is determined the habitat no longer exists or has been destroyed.</p>
<p>Moderate (TL)</p>	<p>Special Status Species*</p>	<p>Prohibit surface disturbing activities within Greater sage-grouse winter habitat from December 1 to March 14</p>	<p>Allow no surface disturbing or otherwise disruptive activities in Greater sage-grouse winter habitat from December 1 to March 14.</p> <p>Purpose: To protect Greater sage-grouse wintering habitat.</p> <p>Exception: An exception could be granted if surveys determine that the Greater sage-grouse lek in winter habitat is not occupied, and that snow depths in the area allow continued sage-grouse use. An exception may also be granted by the Field Manager if the operator submits a plan that demonstrates that impacts from the proposed action can be avoided, sufficiently minimized, or adequately mitigated.</p> <p>Modification: The Field Manager may modify the boundaries of the stipulation area if portions of the area do not include habitat or are outside the current defined area, as determined by the BLM.</p> <p>Waiver: A waiver may be granted if it is determined the habitat no longer exists or has been destroyed.</p>

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## APPENDIX 4—RECREATION MANAGEMENT FOR SPECIAL RECREATION MANAGEMENT AREAS AND THE KANAB EXTENSIVE RECREATION MANAGEMENT AREA

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### KANAB COMMUNITY SPECIAL RECREATION MANAGEMENT AREA (SRMA)—OFF-HIGHWAY VEHICLE (OHV) RECREATION MANAGEMENT ZONE (RMZ)

**Recreation Niche:** Close-to-town OHV travel in an exceptionally scenic setting with a variety of trails for different skill levels.

**Recreation Management Objectives:** By the year 2012, manage this zone to provide opportunities for community residents and regional visitors to engage in sustainable, easy-to-access, primarily day-use motorized recreation, providing no less than 75 percent of responding visitors and affected community residents at least a “moderate” realization of these benefits (i.e., 3.0 on a probability scale, where 1 = not at all, 2 = somewhat, 3 = moderate, 4 = total realization).

**Primary Activities:** Driving OHVs, viewing scenery and wildlife, photography, spending time with friends and family, participating in and/or viewing organized events.

**Experiences:** Savoring the sensory experience of an outdoor setting, relishing group togetherness, enjoying risk-taking adventures, appreciating nature, escaping everyday stress and boredom, enjoying easy and convenient access.

Benefits:

- Personal—Improved OHV skills, bonding with family and friends, stress relief, enhanced awareness and appreciation of natural resources, greater self-reliance, renewed human spirit.
- Community—Stronger sense of community dependency on public lands, greater family/group bonding.
- Economic—Enhanced local economy via purchases (gas, groceries, lodging, OHV/outdoor equipment, etc.).
- Environmental—Increased awareness and protection of natural landscapes.

Setting Characteristics:

- Physical—Mostly middle country, but back country and primitive away from designated routes, with regard to naturalness and facilities.
- Social—Front country along trails with regard to group sizes and contacts, but back country away from trails.
- Administrative—Front country along trails and staging areas at entry portals; back country away from trails.

## KANAB COMMUNITY SRMA—NON-MOTORIZED TRAILS RMZ

**Recreation Niche:** Town-accessible hiking trail network offering outstanding views and varied terrain.

**Recreation Management Objectives:** By the year 2012, manage this zone to provide opportunities for community residents and regional visitors to engage in sustainable, easy-to-access, primarily day-use non-motorized recreation, providing no less than 75 percent of responding visitors and affected community residents at least a “moderate” realization of these benefits (i.e., 3.0 on a probability scale, where 1 = not at all, 2 = somewhat, 3 = moderate, 4 = total realization).

**Primary Activities:** Hiking, rock scrambling and climbing, viewing scenery and wildlife, photography, equestrian, spending time with friends and family, participating in and/or viewing organized events.

**Experiences:** Savoring the sensory experience of an outdoor setting, relishing group togetherness, enjoying risk-taking adventures, appreciating nature, escaping everyday stress and boredom, enjoying easy and convenient access.

Benefits:

- Personal—Bonding with family and friends, stress relief, enhanced awareness and appreciation of natural resources, greater self-reliance, renewed human spirit.
- Community—Stronger sense of community dependency on public lands, greater family/group bonding.
- Economic—Enhanced local economy via purchases (gas, groceries, lodging, outdoor equipment, etc.).
- Environmental—Increased awareness and protection of natural landscapes.

Setting Characteristics:

- Physical—Mostly back country along trails, with primitive away from trails, routes, and community.
- Social—Middle country to back country along trails depending on trail traffic; primitive and back country off trail.
- Administrative—Front country at trailheads; middle country along trails; back country and primitive away from trails.

## MOQUITH SRMA—DUNES RMZ

**Recreation Niche:** OHV and non-motorized opportunities on unique, scenic, and expansive sand dunes.

**Recreation Management Objectives:** By the year 2012, manage this zone to provide opportunities for community residents and regional visitors to engage in sustainable, easy-to-access, day-use and multi-day motorized recreation, providing no less than 75 percent of responding visitors and affected community residents at least a “moderate” realization of these

benefits (i.e., 3.0 on a probability scale, where 1 = not at all, 2 = somewhat, 3 = moderate, 4 = total realization).

**Primary Activities:** Driving among sand dunes, camping along dune fringes, photography, spending time with friends and family.

**Experiences:** Savoring the sensory experience of an outdoor setting, relishing group togetherness, enjoying risk-taking adventures, appreciating nature, escaping everyday stress and boredom, enjoying easy and convenient access, learning about sand dune ecosystems.

Benefits:

- Personal—Improved OHV skills, bonding with family and friends, stress relief, enhanced awareness and appreciation of natural resources, greater self-reliance, renewed human spirit.
- Community—Stronger sense of community dependency on public lands, greater family/group bonding.
- Economic—Enhance local economy via purchases (gas, groceries, lodging, OHV/outdoor equipment, etc.).
- Environmental—Increased awareness and protection of natural landscapes.

Setting Characteristics:

- Physical—Mostly front country and middle country with regard to naturalness and facilities.
- Social—Rural around campgrounds and staging areas; front country and middle country among dunes.
- Administrative—Front country at campgrounds and staging areas; middle country and back country among dunes.

## **MOQUITH SRMA—NON-DUNES WOODED RMZ**

**Recreation Niche:** Scenic and extensive OHV trail network accessing vistas, overlooks, flora and fauna, and cultural sites.

**Recreation Management Objectives:** By the year 2012, manage this zone to provide opportunities for community residents and regional visitors to engage in sustainable, easy-to-access, day-use and multi-day motorized and non-motorized recreation, providing no less than 75 percent of responding visitors and affected community residents at least a “moderate” realization of these benefits (i.e., 3.0 on a probability scale, where 1 = not at all, 2 = somewhat, 3 = moderate, 4 = total realization).

**Primary Activities:** Driving OHVs; viewing flora and fauna, geology, and cultural sites; hiking; equestrian; camping; hunting; photography; spending time with friends and family.

**Experiences:** Savoring the sensory experience of an outdoor setting, relishing group togetherness, enjoying risk-taking adventures, appreciating nature, escaping everyday stress and boredom.

**Benefits:**

- Personal—Improved OHV skills, bonding with family and friends, stress relief, enhanced awareness and appreciation of natural resources, greater self-reliance, renewed human spirit.
- Community—Stronger sense of community dependency on public lands, greater family/group bonding.
- Economic—Enhanced local economy via purchases (gas, groceries, lodging, OHV/outdoor equipment, etc.).
- Environmental—Increased awareness and protection of natural landscapes.

**Setting Characteristics:**

- Physical—Mostly front country and middle country with regard to naturalness and facilities.
- Social—Rural around campground and staging areas; front country and middle country along trails; back country and primitive off trails.
- Administrative—Front country at campgrounds and staging areas; middle country and back country along trails; primitive off trails.

**PARIA SRMA—CANYON RMZ**

**Recreation Niche:** World-class wilderness trekking adventure offering deeply entrenched slickrock canyons and associated slot canyon features.

**Recreation Management Objectives:** By the year 2012, manage this zone to provide opportunities for community residents and regional visitors to engage in world-class, long-distance wilderness trekking in a spectacular geologic showcase of colorful deep canyons, cliffs, and narrow slots while preserving its wilderness character, providing no less than 75 percent of responding visitors and affected community residents at least a “moderate” realization of these benefits (i.e., 3.0 on a probability scale, where 1 = not at all, 2 = somewhat, 3 = moderate, 4 = total realization). Other management objectives would continue to be established through the Paria Canyon–Vermilion Cliffs Wilderness Management Plan.

**Primary Activities:** Hiking, rock scrambling and climbing, backpacking, canyoneering, photography, camping, viewing scenic vistas, viewing cultural sites, wilderness exploration.

**Experiences:** Exploring artistic expression, contemplating and shaping spiritual values, savoring the sensory experience of a natural landscape, testing endurance, developing outdoor skills and abilities, enjoying solo exploring and risk-taking adventures, savoring group/family affiliation and bonding, enjoying physical exercise, escaping everyday stress and boredom, feeling good about how natural resources are being managed.

**Benefits:**

- Personal—Improved physical fitness and health, improved outdoor knowledge and skills, stress relief, enhanced awareness and appreciation of nature, greater self-reliance, closer relationship with nature, renewed human spirit.

- Community—Stronger sense of community dependency on public lands, greater family/group bonding.
- Economic—Contributions to local/regional economy through equipment purchases/rentals and guiding operations.
- Environmental—Increased awareness and protection of natural landscapes; reduced human impacts such as litter, vegetation trampling, and unplanned trails.

Setting Characteristics:

- Physical—Mostly back country, but primitive away from trails, with regard to naturalness and facilities.
- Social—Mostly back country and primitive with regard to group encounters and evidence of use.
- Administrative—Mostly primitive with regard to mechanized/motorized use and visitor services, but back country with regard to management controls.

## **PARIA SRMA—UPLANDS RMZ**

**Recreation Niche:** Unique, world-class primitive and back country adventure recreation offering unique upland geologic features.

**Recreation Management Objectives:** By the year 2012, manage this zone to provide opportunities for visitors to engage in world-class wilderness hiking in a spectacular geologic showcase of colorful cliffs and eroded formations while preserving its wilderness character, providing no less than 75 percent of responding visitors and affected community residents at least a “moderate” realization of these benefits (i.e., 3.0 on a probability scale, where 1 = not at all, 2 = somewhat, 3 = moderate, 4 = total realization). Other management objectives would continue to be established through the Paria Canyon–Vermilion Cliffs Wilderness Management Plan.

**Primary Activities:** Hiking, rock scrambling and climbing, photography, viewing wildlife and scenic vistas, wilderness exploration, equestrian.

**Experiences:** Exploring artistic expression, contemplating and shaping spiritual values, savoring the sensory experience of a natural landscape, testing endurance, developing outdoor skills and abilities, enjoying solo exploring and risk-taking adventures, savoring group/family affiliation and bonding, enjoying physical exercise, escaping everyday stress and boredom, feeling good about how natural resources are being managed.

Benefits:

- Personal—Improved physical fitness and health, improved outdoor knowledge and skills, stress relief, enhanced awareness and appreciation of nature, greater self-reliance, closer relationship with nature, renewed human spirit.
- Community—Stronger sense of community dependency on public lands, greater family/group bonding.

- Economic—Contributions to local/regional economy through equipment purchases/rentals and guiding operations.
- Environmental—Increased awareness and protection of natural landscapes; reduced human impacts such as litter, vegetation trampling, and unplanned trails.

Setting Characteristics:

- Physical—Mostly back country, but primitive away from trails, with regard to naturalness and facilities.
- Social—Mostly back country and primitive with regard to group encounters and evidence of use.
- Administrative—Mostly primitive with regard to mechanized/motorized use and visitor services, but back country with regard to management controls.

## ORDERVILLE CANYON SRMA

**Recreation Niche:** Spectacular, primitive riparian canyon travel with abundant geologic formations and diverse flora and fauna.

**Recreation Management Objectives:** By the year 2012, manage this area to provide opportunities for community residents and regional visitors to engage in sustainable, easy-to-access, primarily multi-day non-motorized canyon-oriented recreation, providing no less than 75 percent of responding visitors and affected community residents at least a “moderate” realization of these benefits (i.e., 3.0 on a probability scale, where 1 = not at all, 2 = somewhat, 3 = moderate, 4 = total realization).

**Primary Activities:** Canyoneering, rock scrambling and climbing, hiking, backpacking, hunting, camping, photography, viewing nature and wildlife, equestrian, studying geology.

**Experiences:** Contemplating and shaping spiritual values, savoring the total sensory experience of a natural landscape, testing endurance, developing outdoor skills and abilities, enjoying solo exploring and risk-taking adventures, savoring group/family affiliation and bonding, enjoying physical exercise, escaping everyday stress and boredom, feeling good about how natural resources are being managed.

Benefits:

- Personal—Improved physical fitness and health, improved outdoor knowledge and skills, stress relief, enhanced awareness and appreciation of nature, greater self-reliance, closer relationship with nature, renewed human spirit.
- Community—Stronger sense of community dependency on public lands, greater family/group bonding.
- Economic—Contributions to local/regional economy through equipment purchases/rentals and guiding operations.
- Environmental—Increased awareness and protection of natural landscapes; reduced human impacts such as litter, vegetation trampling, and unplanned trails.

**Setting Characteristics:**

- Physical—Mostly primitive away from trails with regard to naturalness and facilities.
- Social—Mostly back country and primitive with regard to group encounters and evidence of use.
- Administrative—Mostly primitive with regard to mechanized/motorized use and visitor services, but back country with regard to management controls.

**NORTH FORK VIRGIN RIVER SRMA**

**Recreation Niche:** Spectacular, primitive riparian canyon travel with abundant geologic formations and diverse flora and fauna.

**Recreation Management Objectives:** By the year 2012, manage this area to provide opportunities for community residents and regional visitors to engage in sustainable, easy-to-access, primarily multi-day non-motorized canyon-oriented recreation, providing no less than 75 percent of responding visitors and affected community residents at least a “moderate” realization of these benefits (i.e., 3.0 on a probability scale, where 1 = not at all, 2 = somewhat, 3 = moderate, 4 = total realization).

**Primary Activities:** Canyoneering, rock scrambling and climbing, hiking, backpacking, hunting, camping, photography, viewing nature and wildlife, equestrian, studying geology.

**Experiences:** Contemplating and shaping spiritual values, savoring the sensory experience of a natural landscape, testing endurance, developing outdoor skills and abilities, enjoying solo exploring and risk-taking adventures, savoring group/family affiliation and bonding, enjoying physical exercise, escaping everyday stress and boredom, feeling good about how natural resources are being managed.

**Benefits:**

- Personal—Improved physical fitness and health, improved outdoor knowledge and skills, stress relief, enhanced awareness and appreciation of nature, greater self-reliance, closer relationship with nature, renewed human spirit.
- Community—Stronger sense of community dependency on public lands, greater family/group bonding.
- Economic—Contributions to local/regional economy through equipment purchases/rentals and guiding operations.
- Environmental—Increased awareness and protection of natural landscapes; reduced human impacts such as litter, vegetation trampling, and unplanned trails.

**Setting Characteristics:**

- Physical—Mostly primitive away from trails with regard to naturalness and facilities.
- Social—Mostly back country and primitive with regard to group encounters and evidence of use.
- Administrative—Mostly primitive with regard to mechanized/motorized use and visitor services, but back country with regard to management controls.

## ESCALANTE SRMA

**Recreation Niche:** Town-accessible hiking/equestrian trail network offering outstanding views and varied terrain.

**Recreation Management Objectives:** By the year 2012, manage this area to provide opportunities for community residents and regional visitors to engage in sustainable, easy-to-access, primarily day-use non-motorized recreation, providing no less than 75 percent of responding visitors and affected community residents at least a “moderate” realization of these benefits (i.e., 3.0 on a probability scale, where 1 = not at all, 2 = somewhat, 3 = moderate, 4 = total realization).

**Primary Activities:** Hiking, rock scrambling and climbing, viewing scenery and wildlife, photography, equestrian, spending time with friends and family, participating in and/or viewing organized events.

**Experiences:** Savoring the sensory experience of an outdoor setting; relishing group togetherness; enjoying risk-taking adventures; appreciating nature; escaping everyday stress and boredom; enjoying easy and convenient access; exercising in a healthy, aesthetically pleasing environment.

Benefits:

- Personal—Improved outdoor knowledge and skills; bonding with family and friends; stress relief; enhanced awareness and appreciation of natural resources; greater self-reliance; renewed human spirit; exercising in a healthy, aesthetically pleasing environment.
- Community—Stronger sense of community dependency on public lands, greater family/group bonding, healthier lifestyles.
- Economic—Decreased burden on community health care system from healthier lifestyles.
- Environmental—Increased awareness and protection of natural landscapes.

Setting Characteristics:

- Physical—Mostly backcountry along trails, with primitive away from trails and community.
- Social—Middle country to back country along trails depending on trail traffic; primitive and back country off trail.
- Administrative—Front country at trailheads; middle country along trails; back country and primitive away from trails.

## KANAB FIELD OFFICE ERMA

**Recreation Management Objectives:** Manage this Extensive RMA (ERMA) to provide opportunities for a wide variety of motorized, mechanized, non-motorized, and non-mechanized recreational activities largely free from heavily restrictive regulations and management constraints in a variety of settings ranging from open, gently rolling sand dunes to precipitous

sandstone canyons and steep, rocky slopes. Route designations would allow visitors to access most terrain by motorized vehicle, while leaving large expanses of undeveloped back country in which to “lose oneself.”

**Primary Activities:** OHV touring; hiking; picnicking; backpacking; hunting; fishing; camping; equestrian; photography; viewing geologic features, nature, and wildlife; participating in and/or viewing organized events.

**Experiences:** Contemplating and shaping spiritual values, savoring the sensory experience of a natural landscape, testing endurance, developing outdoor skills and abilities, enjoying OHV and 4x4 touring, enjoying solo exploring and risk-taking adventures, savoring group/family affiliation and bonding, enjoying physical exercise, escaping everyday stress and boredom, feeling good about how natural resources are being managed.

Benefits:

- Personal—Improved outdoor knowledge and skills, bonding with family and friends, stress relief, enhanced awareness and appreciation of natural resources, greater self-reliance, renewed human spirit.
- Community—Stronger sense of community dependency on public lands, greater family/group bonding.
- Economic—Enhanced local economy via purchases (gas, groceries, lodging, OHV/outdoor equipment, etc.).
- Environmental—Increased awareness and protection of natural landscapes.

Setting Characteristics:

- Physical—Broad range from primitive to rural.
- Social—Entire spectrum from primitive to rural with regard to group encounters and evidence of use.
- Administrative—Mostly primitive and back country with regard to visitor services and management controls.

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## APPENDIX 5—LANDS DESIGNATED FOR POTENTIAL DISPOSAL VIA FEDERAL LAND POLICY AND MANAGEMENT ACT SECTION 203 SALE

Below is a list of the lands designated for potential disposal via Federal Land Policy and Management Act Section 203 sale.

### Legal Descriptions:

- T. 31 S., R. 3 W., Sec. 17, E $\frac{1}{2}$ E $\frac{1}{2}$
- T. 33 S., R. 4 E., Sec. 35, SW $\frac{1}{4}$ SW $\frac{1}{4}$
- T. 33 S., R. 4 E., Sec. 36, W $\frac{1}{2}$ NW $\frac{1}{4}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$
- T. 34 S., R. 2 W., Sec. 22 (all public lands within Widtsoe Township)
- T. 34 S., R. 2 E., Sec. 34
- T. 34 S., R. 2 E., Sec. 35
- T. 34 S., R. 5 W., Sec. 22, W $\frac{1}{2}$ NE $\frac{1}{4}$ SE $\frac{1}{4}$ , NW $\frac{1}{4}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$ , S $\frac{1}{2}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$
- T. 34 S., R. 5 W., Sec. 23, SW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ E $\frac{1}{2}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$ , E $\frac{1}{2}$ SW $\frac{1}{4}$
- T. 34 S., R. 5 W., Sec. 27, E $\frac{1}{2}$ NE $\frac{1}{4}$
- T. 35 S., R. 2 E., Sec. 3
- T. 35 S., R. 2 E., Sec. 11, a portion of NW $\frac{1}{4}$ S $\frac{1}{2}$ SE $\frac{1}{4}$  (all public land outside Grand Staircase–Escalante National Monument [GSENM])
- T. 35 S., R. 2 E., Sec. 15, a portion of N $\frac{1}{2}$ NE $\frac{1}{4}$ NE $\frac{1}{4}$  (all public land outside GSENM)
- T. 35 S., R. 2 E., Sec. 17, a portion of NW $\frac{1}{4}$ NW $\frac{1}{4}$ SE $\frac{1}{4}$ SE $\frac{1}{4}$  (all public land outside GSENM)
- T. 35 S., R. 2 E., Sec. 20, a portion of W $\frac{1}{2}$ SW $\frac{1}{4}$ SE $\frac{1}{4}$  (all public land outside GSENM)
- T. 35 S., R. 3 E., Sec. 5 (beginning at a Utah State Park aluminum pipe and cap monument, said point being N89°49'37"W 450.67 feet along the Section Line [Basis of Bearing] from the South Quarter Corner of Section 5, Township 35 South, Range 3 East, Salt Lake Base and Meridian; thence N89°49'37"W 1086.66 feet along said Section Line to PK nail and washer in the top of a sandstone ridge; thence N0°00'22"E 205.28 feet to a metal fence post; thence S89°49'37"E 1086.66 feet parallel with said Section Line to a Utah State Park aluminum pipe and cap monument; thence S0°00'22"W 205.28 feet to a Utah State Park monument and the point of beginning)
- T. 35 S., R. 3 E., Sec. 18, W $\frac{1}{2}$ W $\frac{1}{2}$
- T. 35 S., R. 3 E., Sec. 19, NW $\frac{1}{4}$ NW $\frac{1}{4}$
- T. 35 S., R. 3 E., Sec. 19, W $\frac{1}{2}$ SE $\frac{1}{4}$ , S $\frac{1}{2}$ SW $\frac{1}{4}$ , NE $\frac{1}{4}$ SW $\frac{1}{4}$
- T. 36 S., R. 1 E., Sec. 4, SW $\frac{1}{4}$ NE $\frac{1}{4}$ , NW $\frac{1}{4}$ SE $\frac{1}{4}$
- T. 36 S., R. 3 E., Sec. 4, S $\frac{1}{2}$ NW $\frac{1}{4}$ , W $\frac{1}{2}$ SW $\frac{1}{4}$ , SE $\frac{1}{4}$ SW $\frac{1}{4}$
- T. 36 S., R. 3 E., Sec. 9, S $\frac{1}{2}$ NE $\frac{1}{4}$ , NW $\frac{1}{4}$ , SW $\frac{1}{4}$ , SE $\frac{1}{4}$
- T. 36 S., R. 3 E., Sec. 10, NE $\frac{1}{4}$ NE $\frac{1}{4}$
- T. 36 S., R. 3 E., Sec. 10, S $\frac{1}{2}$ SW $\frac{1}{4}$
- T. 36 S., R. 3 E., Sec. 11, N $\frac{1}{2}$ NW $\frac{1}{4}$
- T. 36 S., R. 3 E., Sec. 11, SE $\frac{1}{4}$ SW $\frac{1}{4}$ , W $\frac{1}{2}$ SE $\frac{1}{4}$
- T. 36 S., R. 3 E., Sec. 14, E $\frac{1}{2}$ , E $\frac{1}{2}$ W $\frac{1}{2}$ , NW $\frac{1}{4}$  NW $\frac{1}{4}$
- T. 36 S., R. 3 E., Sec. 15, E $\frac{1}{2}$ NE $\frac{1}{4}$ , SW $\frac{1}{4}$ NE $\frac{1}{4}$
- T. 36 S., R. 3 E., Sec. 15, N $\frac{1}{2}$ NW $\frac{1}{4}$
- T. 36 S., R. 3 E., Sec. 15, SW $\frac{1}{4}$ SW $\frac{1}{4}$
- T. 36 S., R. 3 W., Sec. 7, W $\frac{1}{2}$ NW $\frac{1}{4}$
- T. 37 S., R. 2 W., Sec. 21, N $\frac{1}{2}$ SE $\frac{1}{4}$ , NE $\frac{1}{4}$ SW $\frac{1}{4}$

- T. 37 S., R. 2 W., Sec. 22, SE<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub>
- T. 37 S., R. 2 W., Sec. 27, E<sup>1</sup>/<sub>2</sub>NE<sup>1</sup>/<sub>4</sub>, NE<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub>
- T. 37 S., R. 2 W., Sec. 29, N<sup>1</sup>/<sub>2</sub> NW<sup>1</sup>/<sub>4</sub>, SW<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub>
- T. 37 S., R. 2 W., Sec. 29, NE<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub>
- T. 37 S., R. 2 W., Sec. 30, S<sup>1</sup>/<sub>2</sub>NE<sup>1</sup>/<sub>4</sub>
- T. 37 S., R. 2 W., Sec. 31, SE<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub>
- T. 37 S., R. 2 W., Sec. 31, NW<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub>
- T. 37 S., R. 2 W., Sec. 31, SE<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub>
- T. 38 S., R. 1 W., Sec. 5, SW<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub>
- T. 38 S., R. 1 W., Sec. 8, W<sup>1</sup>/<sub>2</sub>W<sup>1</sup>/<sub>2</sub>, NE<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub>
- T. 38 S., R. 2 W., Sec. 6, Lot 2
- T. 38 S., R. 2 W., Sec. 11, SE<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub>, W<sup>1</sup>/<sub>2</sub>SW<sup>1</sup>/<sub>4</sub>, SE<sup>1</sup>/<sub>4</sub>
- T. 38 S., R. 2 W., Sec. 12, W<sup>1</sup>/<sub>2</sub>NW<sup>1</sup>/<sub>4</sub>, SE<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub>, S<sup>1</sup>/<sub>2</sub>SE<sup>1</sup>/<sub>4</sub>
- T. 38 S., R. 2 W., Sec. 13, N<sup>1</sup>/<sub>2</sub> N<sup>1</sup>/<sub>2</sub>
- T. 38 S., R. 2 W., Sec. 14, NE<sup>1</sup>/<sub>4</sub>, W<sup>1</sup>/<sub>2</sub>NW<sup>1</sup>/<sub>4</sub>, all public land outside GSENM in the NE<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub>, SE<sup>1</sup>/<sub>4</sub>
- T. 38 S., R. 2 W., Sec. 15, all public land outside GSENM in the SE<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub>, SW<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub>
- T. 38 S., R. 3 W., Sec. 1, Lots 3 and 4, SW<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub>, SE<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub>, NE<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub>, NW<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub>
- T. 39 S., R. 4<sup>1</sup>/<sub>2</sub> W., Sec. 27, NW<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub>, NE<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub>, SE<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub>, SW<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub>
- T. 39 S., R. 4<sup>1</sup>/<sub>2</sub> W., Sec. 34, Lot 4
- T. 39 S., R. 4<sup>1</sup>/<sub>2</sub> W., Sec. 35, W<sup>1</sup>/<sub>2</sub>NE<sup>1</sup>/<sub>4</sub>, SW<sup>1</sup>/<sub>4</sub>
- T. 39 S., R. 5 W., Sec. 21, SE<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub>
- T. 39 S., R. 5 W., Sec. 35, SE<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub>, E<sup>1</sup>/<sub>2</sub>SE<sup>1</sup>/<sub>4</sub>
- T. 39 S., R. 6 W., Sec. 23, N<sup>1</sup>/<sub>2</sub>SE<sup>1</sup>/<sub>4</sub>
- T. 39 S., R. 6 W., Sec. 24, N<sup>1</sup>/<sub>2</sub>SW<sup>1</sup>/<sub>4</sub>
- T. 39 S., R. 7 W., Sec. 25, SW<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub>, SW<sup>1</sup>/<sub>4</sub>, W<sup>1</sup>/<sub>2</sub>SE<sup>1</sup>/<sub>4</sub>
- T. 39 S., R. 7 W., Sec. 28, SW<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub>
- T. 39 S., R. 7 W., Sec. 30, SW<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub>
- T. 39 S., R. 7 W., Sec. 30, SE<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub>
- T. 39 S., R. 7 W., Sec. 31, E<sup>1</sup>/<sub>2</sub>NE<sup>1</sup>/<sub>4</sub>, NW<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub>, NE<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub>
- T. 39 S., R. 7 W., Sec. 34, S<sup>1</sup>/<sub>2</sub>N<sup>1</sup>/<sub>2</sub>
- T. 39 S., R. 7 W., Sec. 35, NE<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub>
- T. 39 S., R. 7 W., Sec. 35, S<sup>1</sup>/<sub>2</sub>NE<sup>1</sup>/<sub>4</sub>
- T. 39 S., R. 8 W., Sec. 4, SE<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub>, SW<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub>
- T. 39 S., R. 8 W., Sec. 7, NE<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub>, S<sup>1</sup>/<sub>2</sub>N<sup>1</sup>/<sub>2</sub>
- T. 39 S., R. 8 W., Sec. 8, SE<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub>
- T. 39 S., R. 8 W., Sec. 9, NW<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub>, SW<sup>1</sup>/<sub>4</sub>SW<sup>1</sup>/<sub>4</sub>
- T. 39 S., R. 8 W., Sec. 17, N<sup>1</sup>/<sub>2</sub>NE<sup>1</sup>/<sub>4</sub>
- T. 39 S., R. 8 W., Sec. 18, SE<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub>
- T. 39 S., R. 8 W., Sec. 34, S<sup>1</sup>/<sub>2</sub>NW<sup>1</sup>/<sub>4</sub>, NW<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub>
- T. 39 S., R. 9 W., Sec. 1, Lot 3, SE<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub>
- T. 39 S., R. 9 W., Sec. 12, NW<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub>,
- T. 39 S., R. 9 W., Sec. 14, NE<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub>,
- T. 39 S., R. 9 W., Sec. 29, W<sup>1</sup>/<sub>2</sub>SE<sup>1</sup>/<sub>4</sub>
- T. 40 S., R. 4 W., Sec. 3, S<sup>1</sup>/<sub>2</sub>SW<sup>1</sup>/<sub>4</sub>
- T. 40 S., R. 4 W., Sec. 4, SE<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub>
- T. 40 S., R. 4 W., Sec. 9, E<sup>1</sup>/<sub>2</sub>NE<sup>1</sup>/<sub>4</sub>
- T. 40 S., R. 4 W., Sec. 10, N<sup>1</sup>/<sub>2</sub>NW<sup>1</sup>/<sub>4</sub>, SW<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub>
- T. 40 S., R. 4 W., Sec. 15, NW<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub>
- T. 40 S., R. 6 W., Sec. 29, SW<sup>1</sup>/<sub>4</sub>
- T. 40 S., R. 7 W., Sec. 1, Lot 3, SW<sup>1</sup>/<sub>4</sub>NE<sup>1</sup>/<sub>4</sub>, SE<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub>

- T. 40 S., R. 8 W., Sec. 1, Lot 3
- T. 40 S., R. 7 W., Sec. 5, Lots 1, 5, SW $\frac{1}{4}$ SW $\frac{1}{4}$
- T. 40 S., R. 8 W., Sec. 3, SE $\frac{1}{4}$ NW $\frac{1}{4}$ , NE $\frac{1}{4}$ SE $\frac{1}{4}$
- T. 40 S., R. 8 W., Sec. 4, Lots 1, 2, 3, 4
- T. 40 S., R. 8 W., Sec. 5, SE $\frac{1}{4}$ NE $\frac{1}{4}$ , E $\frac{1}{2}$ SE $\frac{1}{4}$
- T. 40 S., R. 8 W., Sec. 8, N $\frac{1}{2}$ NE $\frac{1}{4}$
- T. 40 S., R. 8 W., Sec. 11, NW $\frac{1}{4}$ NE $\frac{1}{4}$
- T. 40 S., R. 8 W., Sec. 20, NW $\frac{1}{4}$ SW $\frac{1}{4}$
- T. 40 S., R. 8 W., Sec. 30, SW $\frac{1}{4}$ SE $\frac{1}{4}$
- T. 40 S., R. 8 W., Sec. 31, W $\frac{1}{2}$ NE $\frac{1}{4}$
- T. 40 S., R. 9 W., Sec. 5, SE $\frac{1}{4}$ NE $\frac{1}{4}$
- T. 40 S., R. 9 W., Sec. 22, NE $\frac{1}{4}$ SE $\frac{1}{4}$
- T. 40 S., R. 9 W., Sec. 23, E $\frac{1}{2}$ NW $\frac{1}{4}$
- T. 40 S., R. 9 W., Sec. 25, SE $\frac{1}{4}$ SE $\frac{1}{4}$
- T. 41 S., R. 7 W., Sec. 8, SE $\frac{1}{4}$ SE $\frac{1}{4}$
- T. 41 S., R. 7 W., Sec. 9, Lots 1 through 8, E $\frac{1}{2}$ E $\frac{1}{2}$ , S $\frac{1}{2}$ SW $\frac{1}{4}$
- T. 42 S., R. 5 W., Sec. 27, S $\frac{1}{2}$ SE $\frac{1}{2}$
- T. 42 S., R. 5 W., Sec. 34, NE $\frac{1}{4}$ , NE $\frac{1}{4}$ NW $\frac{1}{4}$ , S $\frac{1}{2}$ NW $\frac{1}{4}$
- T. 42 S., R. 6 W., Sec. 31, NE $\frac{1}{4}$ , SE $\frac{1}{4}$ NW $\frac{1}{4}$ , NE $\frac{1}{4}$ SE $\frac{1}{4}$
- T. 42 S., R. 7 W., Sec. 23 (lands south of Hancock Road)
- T. 42 S., R. 7 W., Sec. 24 (lands south of Hancock Road)
- T. 42 S., R. 7 W., Sec. 25, W $\frac{1}{2}$ NE $\frac{1}{4}$ , NW $\frac{1}{4}$ SE $\frac{1}{4}$
- T. 42 S., R. 7 W., Sec. 26 (lands south and east of Hancock Road)
- T. 43 S., R. 4 $\frac{1}{2}$  W., Sec. 30 (the southernmost portion of Sec. 30, which lies south of the old highway—too small to show up on maps)
- T. 44 S., R. 5 W., Sec. 1, Lot 4, SW $\frac{1}{4}$ NW $\frac{1}{4}$
- T. 44 S., R. 5 W., Sec. 4, SW $\frac{1}{4}$ SW $\frac{1}{4}$
- T. 44 S., R. 6 W., Sec. 6, Lots 3, 4, 5, SE $\frac{1}{4}$ NW $\frac{1}{4}$
- T. 44 S., R. 6 W., Sec. 8, NW $\frac{1}{4}$ NW $\frac{1}{4}$
- T. 44 S., R. 7 W., Sec. 1, Lots 1, 2, 3, 4, N $\frac{1}{2}$ S $\frac{1}{2}$ , SW $\frac{1}{4}$ , NW $\frac{1}{4}$ SE $\frac{1}{4}$
- T. 44 S., R. 7 W., Sec. 11, N $\frac{1}{2}$ NE $\frac{1}{4}$ , NE $\frac{1}{4}$ NW $\frac{1}{4}$
- T. 44 S., R. 7 W., Sec. 12, NW $\frac{1}{4}$ NW $\frac{1}{4}$
- T. 44 S., R. 8 W., Sec. 3, S $\frac{1}{2}$  (areas outside the Moquith Mountain WSA)
- T. 44 S., R. 8 W., Sec. 4, W $\frac{1}{2}$ NE $\frac{1}{4}$ , NW $\frac{1}{4}$ , S $\frac{1}{2}$  (areas outside the Moquith Mountain WSA)
- T. 44 S., R. 8 W., Sec. 5
- T. 44 S., R. 8 W., Sec. 6, Lots 1 through 4, E $\frac{1}{2}$ , E $\frac{1}{2}$ W $\frac{1}{2}$
- T. 44 S., R. 8 W., Sec. 7, Lots 1 through 5, N $\frac{1}{2}$ NE $\frac{1}{4}$ , NE $\frac{1}{4}$ NW $\frac{1}{4}$
- T. 44 S., R. 8 W., Sec. 8, Lots 1 through 4, N $\frac{1}{2}$ N $\frac{1}{2}$
- T. 44 S., R. 8 W., Sec. 9, Lots 1 through 4, N $\frac{1}{2}$ N $\frac{1}{2}$
- T. 44 S., R. 8 W., Sec. 10, Lots 1 through 4, N $\frac{1}{2}$ N $\frac{1}{2}$  (areas outside the Moquith Mountain WSA)
- T. 44 S., R. 9 W., Sec. 1
- T. 44 S., R. 9 W., Sec. 3
- T. 44 S., R. 9 W., Sec. 4
- T. 44 S., R. 9 W., Sec. 9, Lots 1 through 4, N $\frac{1}{2}$ ,N $\frac{1}{2}$
- T. 44 S., R. 9 W., Sec. 10, Lots 1 through 4, N $\frac{1}{2}$ ,N $\frac{1}{2}$
- T. 44 S., R. 9 W., Sec. 11, Lots 1 through 4, N $\frac{1}{2}$ ,N $\frac{1}{2}$
- T. 44 S., R. 9 W., Sec. 12, Lots 1 through 4, N $\frac{1}{2}$ , N $\frac{1}{2}$

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## APPENDIX 6—KANAB FIELD OFFICE: COAL UNSUITABILITY REPORT

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### INTRODUCTION

Bureau of Land Management (BLM) regulations regarding coal management on public lands are found in Title 43 of the Code of Federal Regulations (CFR), Part 3400. During land use planning, BLM is required to review federal lands and assess whether there are areas unsuitable for all coal mining or for certain stipulated methods of coal mining. This report addresses the 20 criteria of coal unsuitability as defined in 43 CFR 3461.5 and applies these criteria to the known recoverable coal resource areas (KRCRA) for the Alton, Kaiparowits, and Kolob coal fields. Unsuitability decisions were based on these criteria and applied to federally owned coal estates within the Kanab Field Office (KFO) Decision Area (KDA). Currently there are no active coal leases within the KDA, but one lease application is presently being processed/analyzed in the Alton Amphitheater.

### GEOLOGIC SETTING

KPA coals are located within Late Cretaceous sedimentary strata of the Dakota and Straight Cliffs formations. The Alton and Kolob coal fields are in the Dakota Formation and the Kaiparowits coal field is in the John Henry Member of the Straight Cliffs Formation. The depositional environment for both the Dakota and Straight Cliffs coals was a coastal plain setting along the Western Interior Seaway. The Dakota coals were deposited approximately 95 million years ago during the onset (transgression) of the Western Interior Seaway. Kaiparowits coals were deposited approximately 85 million years ago as the Western Interior Seaway regressed from the area. Rivers originating along the Sevier Mountain belt and Mogollon highlands provided a steady supply of sediment for burial of the rich coastal mires.

### LANDS CONSIDERED

The recoverable coal resources within the Kanab Planning Area (KPA) cross a number of surface ownership boundaries, including BLM, U.S. Forest Service (USFS), National Park Service (NPS), State of Utah, and private lands, and are located within Kane and Garfield counties. This report considers approximately 149,168 acres of federally owned coal within the KRCRA (Map 1) of the KDA.

### COAL RESOURCES

The *Kanab Field Office Mineral Potential Report* (BLM/Utah Geological Survey 2006) identifies an in-ground coal resource for the KPA of approximately 10 billion tons. Approximately 200 million tons have been identified as surface minable in the Alton coal field. Generally, Dakota Formation coals range from a subbituminous B rank in the Alton coal field to subbituminous A rank in the Kolob coal field. The sulfur content varies, but averages about 1.2 percent. The in-place ash content generally ranges between 10 percent and 15 percent. Heat content for Dakota Formation coals varies from about 7,500 to 9,500 BTU/lb. In the Kaiparowits field, the coal rank decreases from high-volatile C bituminous to subbituminous from south to

north in the KPA. The ash and sulfur levels of the Straight Cliffs coals average about 10 percent and 0.7 percent, respectively. The heat content of Kaiparowits coal ranges from about 7,420 to 10,300 BTU/lb (BLM/UGS 2006).

Table A0-1 through Table A0-3 identify the coal resources based on the depth of cover and the mapped quadrangle. Shallower depths of cover, which have the potential for surface mining, are presented in Table A0-1.

**Table A0-1. Alton Coal Field**

Quadrangle	Depth of Cover				TOTAL
	0–200 ft	200–1000 ft	1000–2000 ft	2000–3000 ft	
Alton	95.3	212.1	114.3	98.9	520.6
Bald Knoll	52.7	152.9	48.8	42.3	296.7
Orderville NE-SE	38.3	96.9	0.0	0.0	135.2
Skutumpah Creek	16.9	183.4	107.4	17.8	325.5
<b>TOTAL</b>	<b>203.2</b>	<b>645.3</b>	<b>270.5</b>	<b>159.0</b>	<b>1,278.0</b>
<b>PERCENT</b>	<b>15.9%</b>	<b>50.5%</b>	<b>21.2%</b>	<b>12.4%</b>	<b>100.0%</b>

Identified coal resource for the Alton coal field within the KPA by depth of cover and quadrangle (in millions of tons; from BLM/UGS 2006)

**Table A0-2. Kolob Coal Field**

Quadrangle	Depth of Cover			TOTAL
	0–1000 ft	1000–2000 ft	2000–3000 ft	
Orderville Canyon NE	62.4	305.6	193.2	561.2
Orderville Canyon SE	258.7	143.0	0.0	401.7
Orderville SW	132.2	257.0	8.4	397.6
<b>TOTAL</b>	<b>453.3</b>	<b>705.6</b>	<b>201.6</b>	<b>1,360.5</b>
<b>PERCENT</b>	<b>33.3%</b>	<b>51.9%</b>	<b>14.8%</b>	<b>100.0%</b>

Identified coal resource for the Kolob coal field within the KPA by depth of cover and quadrangle (in millions of tons; from BLM/UGS 2006)

**Table A0-3. Kaiparowits Coal Field**

Township/ Range	Depth of Cover					TOTAL
	Minaible			Deep		
	0–1000 ft	1000–2000 ft	2000–3000 ft	3000–6000 ft	> 6000 ft	
33S, 2W	0.0	0.0	0.0	0.0	0.0	0.0
33S, 1W	0.0	0.0	0.0	0.0	0.0	0.0
33S, 1E	0.0	94.9	655.4	1,046.6	0.0	1,796.9
33S, 2E	10.5	48.8	93.3	7.3	0.0	159.9
34S, 2W	7.5	121.2	113.1	74.4	0.0	316.2

Township/ Range	Depth of Cover					TOTAL
	Minable			Deep		
	0–1000 ft	1000–2000 ft	2000–3000 ft	3000–6000 ft	> 6000 ft	
34S, 1W	0.0	0.0	45.3	49.9	0.0	95.2
34S, 1E	33.2	589.7	284.5	278.9	0.0	1,186.3
34S, 2E	1.4	45.0	0.0	0.0	0.0	46.4
35S, 2W	111.3	150.2	165.6	249.0	0.0	676.1
35S, 1W	0.0	0.0	0.0	405.7	54.4	460.1
35S, 1E	20.0	190.5	188.9	356.4	6.9	762.7
36S, 2W (N½)	65.5	42.6	7.9	0.1	0.0	116.1
36S, 1W (N½)	9.7	22.5	101.8	151.8	7.4	293.2
36S, 1E	104.2	217.8	189.5	948.8	0.0	1,460.3
<b>TOTAL</b>	<b>363.3</b>	<b>1,523.2</b>	<b>1,845.3</b>	<b>3,568.9</b>	<b>68.7</b>	<b>7,369.4</b>
<b>PERCENT</b>	<b>4.9%</b>	<b>20.7%</b>	<b>25.0%</b>	<b>48.4%</b>	<b>0.9%</b>	<b>100.0%</b>

Identified coal resource for the Kaiparowits Plateau coal field within the KPA by depth of cover and township (in millions of tons; from BLM/UGS 2006)

## EVALUATION OF THE COAL UNSUITABILITY CRITERIA

This report assesses KDA coal resources for unsuitability based on the 20 criteria outlined in 43 CFR 3461.5. Underground mining of coal deposits is exempt from the criteria, where there would be no surface coal mining operations as stated at 3461.1.1(a). Surface mining operations include surface operations and surface impacts incident to an underground mine as stated in 43 CFR 3400.0-5(mm). In addition, where underground mining would include surface operations and surface impacts on federal lands to which a criterion applies, the lands shall be assessed as unsuitable unless an exception or exemption applies (43 CFR 3461.1(b)). Each criterion is subject to exceptions and/or exemptions as prescribed in the regulations.

### Criterion Number 1

All Federal lands included in the following land systems or categories shall be considered unsuitable: National Park System; National Wildlife Refuge System; National System of Trails; National Wilderness Preservation System; National Wild and Scenic Rivers System; National Recreation Areas; lands acquired with money derived from the Land and Water Conservation Fund; National Forests; and Federal lands in incorporated cities, towns, and villages.

- *Exceptions.* (i) A lease may be issued within the boundaries of any National Forest if the Secretary finds no significant recreational, timber, economic or other values which may be incompatible with the lease; and (A) surface operations and impacts are incident to an underground coal mine, or (B) where the Secretary of Agriculture determines, with respect to lands which do not have significant forest cover within those National Forests west of the 100th Meridian, that surface mining may be in compliance with the Multiple-

*Use Sustained-Yield Act of 1960, the Federal Coal Leasing Amendments Act of 1976 and the Surface Mining Control and Reclamation Act of 1977. (ii) A lease may be issued within the Custer National Forest with the consent of the Department of Agriculture as long as no surface coal mining operations are permitted.*

- Exemptions. *The application of this criterion to lands within the listed land systems and categories is subject to valid existing rights, and does not apply to surface coal mining operations existing on August 3, 1977.*

A number of land systems specified in Criterion 1 are applicable under the unsuitability criteria.

**National Forests**

All National Forest lands are considered unsuitable for surface coal mining operations. An exception to this criterion would allow surface operations based on the specific criteria outlined above. The Dixie National Forest prepared a Coal Unsuitability Study in 1983, and found that only 10 acres met the conditions of the exception. The study was based on areas identified as high- and moderate-potential coal lands that did not have significant forest cover. However, National Forest lands are outside of the KDA and are not included in the BLM unsuitability decision.

**National Recreation Areas**

There are about 2,120 acres of federal coal in the Kaiparowits coal field that underlie the Glen Canyon National Recreation Area. Under Criterion 1, this federal coal is unsuitable for surface coal mining, however, it is not included in the BLM unsuitability decision because the lands are outside of the KDA.

**National Wild and Scenic Rivers System**

There are about 230 acres of lands that are considered suitable for inclusion in the National Wild and Scenic Rivers System.

**Incorporated Cities, Towns, and Villages**

Approximately 3,000 acres of federal coal in the Alton and Kolob coal fields within the KRCRA underlie the towns of Alton, Orderville, and Glendale. Because of possible damage to private property caused by subsidence and surface mining, these areas are determined to be unsuitable and will not be further considered for future leasing. The breakdown of the number of acres within each town is as follows:

Alton	101 acres
Glendale	1,742 acres
Orderville	1,162 acres

Exemptions for valid existing rights do not apply.

**Summary: Criterion 1**—Approximately 3,237 acres are determined to be unsuitable based on the conditions set forth in this criterion.

### **Criterion Number 2**

Federal lands that are within rights-of-way or easements or within surface leases for residential, commercial, industrial, or other public purposes, on federally owned surface shall be considered unsuitable.

- *Exceptions.* A lease may be issued, and mining operations approved, in such areas if the surface management agency determines that: (i) All or certain types of coal development (e.g., underground mining) will not interfere with the purpose of the right-of-way or easement; or (ii) The right-of-way or easement was granted for mining purposes; or (iii) The right-of-way or easement was issued for a purpose for which it is not being used; (iv) The parties involved in the right-of-way or easement agree, in writing, to leasing; or (v) It is impractical to exclude such areas due to the location of coal and method of mining and such areas or uses can be protected through appropriate stipulations.
- *Exemptions.* This criterion does not apply to lands: To which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

There are only 17 recorded rights-of-way (ROW), totaling approximately 30 acres of land, within the KRCRA. The exception (parts (i), (iv), and (v)) of this criterion offers protection for the ROWs and their improvements from the potential adverse effects of mining or associated surface facilities and, therefore, will not be considered unsuitable.

There are a large number of roads that will be evaluated in the future for Revised Statute (RS) 2477 standing. This could greatly affect the number of ROWs within the KRCRA. It is likely that the criterion exception would also apply in these cases.

**Summary: Criterion 2**—No acres are determined to be unsuitable based on the conditions set forth in this criterion.

### **Criterion Number 3**

The terms used in this criterion have the meaning set out in the Office of Surface Mining Reclamation and Enforcement regulations at Chapter VII of Title 30 of the Code of Federal Regulations. Federal lands affected by section 522(e) (4) and (5) of the Surface Mining Control and Reclamation Act of 1977 shall be considered unsuitable. This includes lands within 100 feet of the outside line of the right-of-way of a public road or within 100 feet of a cemetery, or within 300 feet of any public building, school, church, community or institutional building or public park or within 300 feet of an occupied dwelling.

- *Exceptions.* A lease may be issued for lands: (i) Used as mine access roads or haulage roads that join the right-of-way for a public road; (ii) For which the Office of Surface Mining Reclamation and Enforcement has issued a permit to have public roads relocated; (iii) If after public notice and opportunity for public hearing in the locality, a written finding is made by the authorized

*officer that the interests of the public and the landowners affected by mining within 100 feet of a public road will be protected; (iv) For which owners of occupied dwellings have given written permission to mine within 300 feet of their buildings.*

- *Exemptions. The application of this criterion is subject to valid existing rights, and does not apply to surface coal mining operations existing on August 3, 1977.*

Criterion 3 identifies approximately 3,200 acres of land within the KRCRA that have been found to be unsuitable. Data was not available to ascertain the location of all public buildings, community or institutional buildings, or occupied dwellings. Therefore, municipality boundaries were used to identify the areas of unsuitability. There are still a number of homes and summer cabins on private lands outside of these boundaries that are underlain by federal coal in the Alton and Kolob fields. A survey of the exact locations was not conducted. Because many of these structures are located in areas that would be mined primarily by underground methods, the underground exemption could possibly be applied. If the exemption could not be applied, mining would not be allowed within 300 feet of any such dwelling. A survey of existing dwellings would be made if leasing of federal coal is considered. The owners of the dwellings would be given the opportunity to give written permission for mining. If permission is not obtained, the area would then be designated unsuitable and the exact acreage calculated. Until that time, the area will be considered suitable.

The Alton Cemetery is underlain by surface minable coal. This area is unsuitable because surface mining is prohibited within 100 feet of a cemetery. This involves only about 1 acre.

As mentioned above in Criterion 2, the total acreage determined to be unsuitable could increase significantly in the future based on administrative determinations regarding RS 2477 road assertions.

The exemptions for valid existing rights do not apply because there are presently no authorized coal leases within the KRCRA.

**Summary: Criterion 3**—Approximately 3,200 acres are determined to be unsuitable for surface coal mining and surface impacts incident to underground mining based on the conditions set forth in this criterion.

#### **Criterion Number 4**

Federal lands designated as wilderness study areas shall be considered unsuitable while under review by the Administration and the Congress for possible wilderness designation. For any Federal land which is to be leased or mined prior to completion of the wilderness inventory by the surface management agency, the environmental assessment or impact statement on the lease sale or mine plan shall consider whether the land possesses the characteristics of a wilderness study area. If the finding is affirmative, the land shall be considered unsuitable, unless issuance of noncompetitive coal leases and mining on leases is authorized under the Wilderness Act and the Federal Land Policy and Management Act of 1976.

- *Exemptions. The application of this criterion to lands for which the Bureau of Land Management is the surface management agency and lands in designated wilderness areas in National Forests is subject to valid existing rights.*

There is one Wilderness Study Area (WSA) that partially overlies the KRCRA. Therefore, approximately 45 acres within the Parunuweap Canyon WSA are considered unsuitable.

The exemptions for valid existing rights do not apply because there are presently no authorized coal leases within the KRCRA.

**Summary: Criterion 4**—Approximately 45 acres are determined to be unsuitable for surface coal mining and surface impacts incident to underground mining based on the conditions set forth in this criterion.

### **Criterion Number 5**

Scenic Federal lands designated by visual resource management analysis as Class I (areas of outstanding scenic quality or high visual sensitivity) but not currently on the National Register of Natural Landmarks shall be considered unsuitable.

- *Exceptions.* A lease may be issued if the surface management agency determines that surface coal mining operations will not significantly diminish or adversely affect the scenic quality of the designated area.
- *Exemptions.* This criterion does not apply to lands: to which the operator has made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977, or which include operations on which a permit has been issued.

There are presently no Visual Resource Management (VRM) Class I lands within the KRCRA. This will change in the future with the new KFO Resource Management Plan (RMP) based on BLM policy set forth in the Washington Office Instruction Memorandum 2000-096, which directs BLM to assign VRM Class I designations to all WSA lands. Therefore, after authorization of the new RMP, 45 acres in the Parunuweap Canyon WSA that fall within the KRCRA (Criterion 4) will become unsuitable for surface mining.

**Summary: Criterion 5**—No acres are determined to be unsuitable at this time.

### **Criterion Number 6**

Federal lands under permit by the surface management agency, and being used for scientific studies involving food or fiber production, natural resources, or technology demonstrations and experiments shall be considered unsuitable for the duration of the study, demonstration or experiment, except where mining could be conducted in such a way as to enhance or not jeopardize the purposes of the study, as determined by the surface management agency, or where the principal scientific user or agency gives written concurrence to all or certain methods of mining.

- *Exemptions.* This criterion does not apply to lands: To which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

Southern Utah University in conjunction with the Utah Division of Wildlife Resources (UDWR) and the KFO BLM are studying Greater sage-grouse in the Alton area. The study incorporates

approximately 5,800 acres within the Alton Amphitheater. The purpose of the study is to determine locations and suitability for sage-grouse brooding and winter habitats. This study is scheduled to be complete in 2008. The schedule would not conflict with future mining/leasing and, therefore, the project area is considered suitable under this criterion.

**Summary: Criterion 6**—No acres are determined to be unsuitable.

### **Criterion Number 7**

All publicly or privately owned places which are included in the National Register of Historic Places shall be considered unsuitable. This shall include any areas that the surface management agency determines, after consultation with the Advisory Council on Historic Preservation and the State Historic Preservation Officer, are necessary to protect the inherent values of the property that made it eligible for listing in the National Register.

- *Exceptions.* All or certain stipulated methods of coal mining may be allowed if, after consultation with the Advisory Council on Historic Preservation and the State Historic Preservation Officer, they are approved by the surface management agency, and, where appropriate, the State or local agency with jurisdiction over the historic site.
- *Exemptions.* This criterion does not apply to lands: to which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

This criterion applies to districts, sites, objects, and other items of historical, architectural, archaeological, or cultural significance in or eligible for inclusion in the National Register of Historic Places. Although no sites within the KRCRA have been included in the National Register, there are a large number of known and documented archaeological sites that have been determined eligible. The exception for stipulated coal mining methods that will not result in adverse impacts is applicable; however, mitigation may be required for eligible sites where adverse impacts cannot be avoided. The State Historic Preservation Officer has identified possible subsidence problems associated with underground mining. Stipulations would be necessary in any future leases to mitigate the adverse effects of subsidence.

**Summary: Criterion 7**—No acres are determined to be unsuitable at this time.

### **Criterion Number 8**

Federal lands designated as natural areas or as National Natural Landmarks shall be considered unsuitable.

- *Exceptions.* A lease may be issued and mining operation approved in an area or site if the surface management agency determines that: (i) The use of appropriate stipulated mining technology will result in no significant adverse impact to the area or site; or (ii) The mining of the coal resource under appropriate stipulations will enhance information recovery (e.g., paleontological sites).
- *Exemptions.* This criterion does not apply to lands: To which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which includes operations on which a permit has been issued.

There are no designated natural areas or National Natural Landmarks designated under 43 CFR 2070 within the KRCRA.

**Summary: Criterion 8**—No acres are determined to be unsuitable.

### **Criterion Number 9**

Federally designated critical habitat for listed threatened or endangered plant and animal species, and habitat proposed to be designated as critical for listed threatened or endangered plant and animal species or species proposed for listing, and habitat for Federal threatened or endangered species which is determined by the Fish and Wildlife Service and the surface management agency to be of essential value and where the presence of threatened or endangered species has been scientifically documented, shall be considered unsuitable.

- *Exceptions. A lease may be issued and mining operations approved if, after consultation with the Fish and Wildlife Service, the Service determines that the proposed activity is not likely to jeopardize the continued existence of the listed species and/or its critical habitat.*
- *Exemptions. This criterion does not apply to lands: to which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.*

There are approximately 33,972 acres of federally designated critical habitat for the Mexican spotted owl (MSO) within the boundaries of the KRCRA. In informal consultation with the U.S. Fish and Wildlife Service (USFWS), BLM mapped areas that contain only the primary constituent elements for MSO habitat, as defined by the *Mexican Spotted Owl Recovery Plan* (USFWS 2001, FR 8530, vol. 66 no. 22). These areas were identified using professional judgment and by buffering the 2000 Willey MSO habitat model by ½ mile. The areas identified include approximately 4,380 acres of habitat that would be considered unsuitable for surface coal mining or surface facilities. In the event of future leasing, BLM would inventory coal areas for threatened and endangered (T&E) plant and animal species in conjunction with a site-specific environmental impact statement (EIS) analysis. Critical habitat designations for T&E plant or animal species will likely change in the future, at which time the determination of suitability would be revised.

Past surveys include a general reconnaissance for T&E plants in the entire southern Utah coal area by Dr. Stanley Welch in 1977. Moderately intensive surveys were conducted by Dr. Kent Ostler in 1979 on about 56,500 acres on the Utah Power and Light Company preference right lease application area, the El Paso Coal Company leases, and the Resources Company leases. A moderately intensive survey on about 26,800 acres in the Alton coal field was conducted by Dr. Robert Foster in 1979. UDWR inventoried the coal areas of southern Utah for T&E animals in 1977 and 1978. The process included a literature search and field inventories. In 1979 and 1980, BLM conducted an essential habitat inventory for the Utah prairie dog, peregrine falcon, and bald eagle in southern Utah. Several bald eagle sightings were made on the Alton and Kolob coal fields, and one concentration area was located (Criterion 12). No peregrine falcons or Utah prairie dogs were identified closer than 10 miles from the KRCRA (Escalante and Zion Unit Resource Analyses; Johnson 1979; UDWR 1977; USFWS 1978, 44 FR 7096, December 10, 1979).

The exception in this criterion could allow for surface mining and surface facilities within these areas only after the USFWS determined that the proposed activity is not likely to jeopardize the continued existence of the MSO or other listed species in the future and/or their critical habitats.

The exemption for substantial legal and financial commitments and ongoing mining operations does not apply because there are no active leases or operations within the planning area.

**Summary: Criterion 9**—Approximately 4,380 acres are determined to be unsuitable for surface coal mining and surface impacts incident to underground mining in the KDA. Exception(s) to this criterion may be applicable subject to site-specific analysis and consultation with USFWS.

### **Criterion Number 10**

Federal lands containing habitat determined to be critical or essential for plant or animal species listed by a state pursuant to state law as endangered or threatened shall be considered unsuitable.

- *Exceptions.* A lease may be issued and mining operations approved if, after consultation with the state, the surface management agency determines that the species will not be adversely affected by all or certain stipulated methods of coal mining.
- *Exemptions.* This criterion does not apply to lands: To which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

The State of Utah does not maintain an official state T&E species list; therefore, no state-listed T&E plant or animal species or critical habitat exists for this criterion.

**Summary: Criterion 10**—No acres are determined to be unsuitable.

### **Criterion Number 11**

A bald or golden eagle nest or site on Federal lands that is determined to be active and an appropriate buffer zone of land around the nest site shall be considered unsuitable. Consideration of availability of habitat for prey species and of terrain shall be included in the determination of buffer zones. Buffer zones shall be determined in consultation with the Fish and Wildlife Service.

- *Exceptions.* A lease may be issued if: (i) It can be conditioned in such a way, either in manner or period of operation, that eagles will not be disturbed during breeding season; or (ii) The surface management agency, with the concurrence of the Fish and Wildlife Service, determines that the golden eagle nest(s) will be moved. (iii) Buffer zones may be decreased if the surface management agency determines that the active eagle nests will not be adversely affected.
- *Exemptions.* This criterion does not apply to lands: to which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

In 2003, UDWR identified an active bald eagle nest within the KPA adjacent to the KRCRA. When including a 1-mile buffer zone, a portion of the KRCRA is intersected. Nests are considered active for a period of 7 years after discovery of a nest in use. Exercising (iii) of the exception above, the buffer has been modified because the natural topography provides adequate protection for the nest site. Approximately 20 acres of land remain unsuitable after the readjustment. Leasing may be feasible within the area determined to be unsuitable if the condition of exceptions (i and ii) are met. The underground exemption could also be applied on possible future leasing. Future leases would stipulate that no surface facilities could be built within a 1-mile radius of an active nest site and that surface operations could be conducted only between September 1 and December 31 of each year (Utah Field Office *Guidelines for Raptor Protection From Human and Land Use Disturbances* [USFWS 1999]). Future inventories by UDWR and BLM may identify additional eagle nests within the coal areas that would render the nest and buffer areas unsuitable.

The exemption for substantial legal and financial commitments and ongoing mining operations does not apply because there are no active leases or operations within the planning area.

**Summary: Criterion 11**—Approximately 20 acres are determined to be unsuitable for surface coal mining and surface impacts incident to underground mining. The exception in this criterion may be applicable subject to site-specific analysis and consultation with USFWS.

### **Criterion Number 12**

Bald and golden eagle roost and concentration areas on Federal lands used during migration and wintering shall be considered unsuitable.

- *Exceptions.* A lease may be issued if the surface management agency determines that all or certain stipulated methods of coal mining can be conducted in such a way, and during such periods of time, to ensure that eagles shall not be adversely disturbed.
- *Exemptions.* This criterion does not apply to lands: to which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

BLM and UDWR inventories have identified a bald eagle winter concentration area of approximately 1,160 acres on Table Bench along the North Fork of the Virgin River. The wintering area is used from about November 1 to March 15 each year. The rough surface topography and the deep coals have led to the determination that only underground methods would be used to mine this area. The exception and underground exemption could be applied to possible future leases and surface facilities to restrict activities that could adversely disturb the eagles during the winter concentration period. Future inventories by BLM and UDWR may identify other bald eagle concentration areas within the coal areas, which could affect suitability (BLM 1978 and 1979, Zion Unit Analysis; UDWR 1977; Johnson 1979).

The exemption for substantial legal and financial commitments and ongoing mining operations does not apply because there are no active leases or operations within the planning area.

**Summary: Criterion 12**—Approximately 1,160 acres are determined to be unsuitable for surface coal mining and surface impacts incident to underground mining. The exception in this criterion may be applicable subject to site-specific analysis.

### **Criterion Number 13**

Federal lands containing a falcon (excluding kestrel) cliff nesting site with an active nest and a buffer zone of Federal land around the nest site shall be considered unsuitable. Consideration of availability of habitat for prey species and of terrain shall be included in the determination of buffer zones. Buffer zones shall be determined in consultation with the Fish and Wildlife Service.

- *Exceptions. A lease may be issued where the surface management agency, after consultation with the Fish and Wildlife Service, determines that all or certain stipulated methods of coal mining will not adversely affect the falcon habitat during the periods when such habitat is used by the falcons.*
- *Exemptions. This criterion does not apply to lands: to which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.*

BLM and UDWR inventories conducted in the late 1970s and early 1980s identified several prairie falcon nesting sites within the KPA, two of which were located within the KRCRA (BLM 1978, 1979 Zion and Escalante Unit Resource Analyses; UDWR 1977, 1978; Hoffman 1978; Johnson 1979; BLM field inventories 1976, 1977, 1978, and 1980). No recent surveys have been conducted to verify this data. Because of the amount of time that has passed since the data was collected and the likelihood of a change of status, no lands are designated as unsuitable under this criterion. A more thorough analysis would be required at the time of coal leasing to adequately address this criterion. Future inventories by UDWR and BLM or site-specific lease analysis may identify new falcon nests within coal areas. At that time the lands would be designated unsuitable unless the exception could be applied.

**Summary: Criterion 13**—No acres are determined to be unsuitable.

### **Criterion Number 14**

Federal lands which are high priority habitat for migratory bird species of high Federal interest on a regional or national basis, as determined jointly by the surface management agency and the Fish and Wildlife Service, shall be considered unsuitable.

- *Exceptions. A lease may be issued where the surface management agency, after consultation with the Fish and Wildlife Service, determines that all or certain stipulated methods of coal mining will not adversely affect the migratory bird habitat during the periods when such habitat is used by the species.*
- *Exemptions. This criterion does not apply to lands: to which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.*

Several Bird Habitat Conservation Areas have been identified by the Intermountain West Joint Venture (IWJV) along the East Fork of the Virgin River, East Fork of the Sevier River (Parker Mountain), and Escalante River in and adjacent to the KRCRA. In consultation with USFWS, BLM determined that high-priority habitats for migratory birds exist along these corridors, defined as a ½-mile buffer zone from the outer edge of the bank. Approximately 8,376 acres of the KRCRA would be affected and considered unsuitable. Future leasing within these areas could occur if site-specific consultation with USFWS determined that such operations would not adversely affect the migratory bird habitat during the periods of use.

The underground exemption does not apply in this criterion because of the potential to affect hydrologic systems and riparian habitat.

The exemption for substantial legal and financial commitments and ongoing mining operations does not apply because there are no active leases or operations within the planning area.

**Summary: Criterion 14**—Approximately 8,120 acres are determined to be unsuitable for surface coal mining and surface impacts incident to underground mining. The exception in this criterion may be applicable subject to site-specific analysis and consultation with USFWS.

### **Criterion Number 15**

Federal lands which the surface management agency and the state jointly agree are habitat for resident species of fish, wildlife and plants of high interest to the state and which are essential for maintaining these priority wildlife and plant species shall be considered unsuitable. Examples of such lands which serve a critical function for the species involved include: (i) Active dancing and strutting grounds for Greater sage-grouse, sharp-tailed grouse, and prairie chicken; (ii) Winter ranges crucial for deer, antelope, and elk; (iii) Migration corridor for elk; and (iv) Extremes of range for plant species.

- *Exceptions. A lease may be issued if, after consultation with the state, the surface management agency determines that all or certain stipulated methods of coal mining will not have a significant long-term impact on the species being protected.*
- *Exemptions. This criterion does not apply to lands: To which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.*

There are approximately 18,330 acres of crucial elk winter range; 12,780 acres of crucial mule deer winter range; 8,735 acres of Greater sage-grouse breeding, nesting, and brood-rearing habitat; and 12 acres classified as leks on federal coal lands within the KRCRA. The State of Utah and BLM agree that elk, mule deer, and sage-grouse habitats should remain suitable because site-specific analyses would occur before coal field leasing. Presently there is an EIS underway as part of a coal leasing application in the Alton Amphitheater. High-interest habitat issues will be addressed in this EIS.

**Table A0-4. State Sensitive Species Habitat**

<b>State Sensitive Species Habitat (acres of habitat by ownership)</b>	<b>USFS</b>	<b>BLM</b>	<b>State Surface</b>	<b>Private Surface</b>
Elk	17,015	1,235		80
Mule Deer	8,445	2,530	680	1,125
Sage-Grouse Breeding, Nesting, and Brood-Rearing	5,735	1,940		1,060
Sage-Grouse Lek		12		

Neither the BLM nor the State of Utah has high-interest plant species of concern within the KRCRA.

The first exception and underground exemption in this criterion would apply.

The exemption for substantial legal and financial commitments and ongoing mining operations does not apply because there are no active leases or operations within the planning area.

**Summary: Criterion 15**—No acres are determined to be unsuitable.

**Criterion Number 16**

Federal lands in riverine, coastal and special floodplains (100-year recurrence interval) on which the surface management agency determines that mining could not be undertaken without substantial threat of loss of life or property shall be considered unsuitable for all or certain stipulated methods of coal mining.

- *Exemptions. This criterion does not apply to lands: To which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.*

Data for this criterion is not presently available to adequately delineate riverine and special floodplains. Limited 100-year flood hazard maps are available from the U.S. Department of Housing and Urban Development, but the data is not adequate to determine the threat assessment. A more thorough analysis will be required at the time of coal leasing to adequately address this criterion.

**Summary: Criterion 16**—No acres are determined to be unsuitable.

**Criterion Number 17**

Federal lands which have been committed by the surface management agency to use as municipal watersheds shall be considered unsuitable.

- *Exceptions. A lease may be issued where the surface management agency in consultation with the municipality (incorporated entity) or the responsible governmental unit*

*determines, as a result of studies, that all or certain stipulated methods of coal mining will not adversely affect the watershed to any significant degree.*

- *Exemptions. This criterion does not apply to lands: To which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.*

No lands within the KRCRA have been committed for use as municipal watersheds.

**Summary: Criterion 17**—No acres are determined to be unsuitable.

### **Criterion Number 18**

Federal lands with National Resource Waters, as identified by states in their water quality management plans, and a buffer zone of Federal lands ¼ mile from the outer edge of the far banks of the water, shall be unsuitable.

- *Exceptions. The buffer zone may be eliminated or reduced in size where the surface management agency determines that it is not necessary to protect the National Resource Waters.*
- *Exemptions. This criterion does not apply to lands: To which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.*

In the State of Utah, the designation “High Quality Waters” is the equivalent of National Resource Waters, and therefore waters with this designation receive additional regulatory protection.

Within the KPA, the State of Utah has designated Category 1 High Quality Waters in the following drainages:

1. North Fork of the Virgin River and tributaries, from the confluence with the East Fork of the Virgin River to its headwaters
2. East Fork of the Virgin River and tributaries, from the confluence with the North Fork of the Virgin River to its headwaters
3. East Fork of the Sevier River and tributaries, from the Kingston diversion to its headwaters
4. Kanab Creek and tributaries, from the irrigation diversion at the confluence with Reservoir Canyon to its headwaters (Utah Administrative Code R317-2-12).

Consistent with Criterion 18 and state rules, BLM has determined that protection of High Quality Waters can be achieved through the use of the unsuitability designation, best management practices (BMP), and the state permitting process. Buffers were established for springs and perennial and intermittent streams, as follows:

- Perennial streams: ¼ mile (1,320 feet; 402 meters) slope distance from the outer edge of the bank

- Intermittent streams: 330 feet (100 meters) slope distance from the outer edge of the bank
- Springs: 330 feet (100 meters) slope distance from the edge of the saturated area.

The locations of springs and perennial and intermittent stream reaches were determined based on interviews with employees of the BLM KFO and NPS (Sharrow, personal communication) as well as with a local landowner who has extensive knowledge of the area (Esplin, personal communication). Their input was used to edit the U.S. Geological Survey (USGS) digital line graphs dataset that covers the KPA. Stream segments that would be perennial or intermittent if it were not for irrigation diversions were classified according to their potential condition rather than their altered condition.

Approximately 13,760 acres are determined to be unsuitable because of proximity to National Resource Waters. It is likely that additional perennial/intermittent streams and springs are present that were not mapped. If such waterways are determined to exist after the publication of this report, they would be buffered and protected as described above.

The exemption for substantial legal and financial commitments and ongoing mining operations does not apply because there are no active leases or operations within the planning area.

**Summary: Criterion 18**—Approximately 12,988 acres are determined to be unsuitable for surface coal mining and surface impacts incident to underground mining.

### **Criterion Number 19**

Federal lands identified by the surface management agency, in consultation with the state in which they are located, as alluvial valley floors according to the definition in §3400.0—5(a) of this title, the standards in 30 CFR Part 822, the final alluvial valley floor guidelines of the Office of Surface Mining Reclamation and Enforcement when published, and approved state programs under the Surface Mining Control and Reclamation Act of 1977, where mining would interrupt, discontinue, or preclude farming, shall be considered unsuitable. Additionally, when mining Federal land outside an alluvial valley floor would materially damage the quantity or quality of water in surface or underground water systems that would supply alluvial valley floors, the land shall be considered unsuitable.

- *Exemptions. This criterion does not apply to surface coal mining operations which produced coal in commercial quantities in the year preceding August 3, 1977, or which had obtained a permit to conduct surface coal mining operations.*

There is insufficient data at this time to determine either suitability or unsuitability of any area for coal development under this criterion. Identification of alluvial valley floors (AVF) is accomplished by the surface management agency in consultation with the state according to the definition in the Surface Mining Control and Reclamation Act of 1977 (SMCRA) (PL 95-87), the standards in 30 CFR 822, the Office of Surface Mining (OSM) AVF guidelines, and approved state programs under SMCRA.

The AVF guidelines provide a sequential procedure for identifying AVFs. The first phase is a reconnaissance investigation that identifies probable AVFs using available regional or generalized data. The second phase is more detailed, and involves test drilling and mapping of

geologic, vegetation, and soils data, leading to a determination that an area meets the criteria outlined in the regulations (30 CFR 78 19(c)(2)). The third phase requires more detailed descriptions of the AVFs identified in phase two, and involves water monitoring for a sufficient period of time to be able to describe seasonal fluctuations.

In response to a petition to designate certain lands in the study area as unsuitable for surface coal mining, OSM completed the first phase of an AVF investigation in the Alton coal field area (OSM 1983). The following list represents areas identified as possible AVFs within the KRCRA, but additional analysis would be required before leasing:

1. Kanab Creek, upper and lower
2. Sink Valley Wash
3. Unnamed tributary north of Alton and west of Kanab Creek
4. Thompson Creek
5. Mill, Tenny, and Skutumpah Creeks
6. Lower Johnson Wash
7. Yellow Creek
8. Upper Paria drainage
9. East Fork of the Sevier River.

AVFs may exist within the decision area, but initial mapping of AVFs has occurred only within the Alton area and at a reconnaissance level. Approximately 3,850 acres were identified as possible AVFs using data obtained from an investigation conducted by Jack Schmidt (1980) and BLM geographic information system (GIS) data layers. No lands within the planning area are designated as unsuitable under this criterion. A more detailed investigation would be required at the time of lease analysis.

The exemption for ongoing mining operations does not apply because there are no active leases or operations within the planning area.

**Summary: Criterion 19**—No acres are determined to be unsuitable.

### **Criterion Number 20**

Federal lands in a state to which is applicable a criterion (i) proposed by the state or Indian tribe located in the planning area, and (ii) adopted by rulemaking by the Secretary, shall be considered unsuitable.

- *Exceptions.* A lease may be issued when: (i) Such criterion is adopted by the Secretary less than 6 months prior to the publication of the draft comprehensive land use plan or land use analysis, plan, or supplement to a comprehensive land use plan, for the area in which such land is included, or (ii) After consultation with the state or affected Indian tribe, the surface management agency determines that all or certain stipulated methods of coal mining will not adversely affect the value which the criterion would protect.
- *Exemptions.* This criterion does not apply to lands: To which the operator made substantial legal and financial commitments prior to January 4, 1977; on which surface coal mining operations were being conducted on August 3, 1977; or which include operations on which a permit has been issued.

Neither the State of Utah nor Indian tribes have proposed any criteria that would affect the coal lands under review, although in 1980 Secretary of Interior Andrus signed a decision designating certain areas in the viewshed of Bryce Canyon National Park unsuitable for surface coal mining and surface impacts incident to underground mining. Approximately 31,620 acres fall within the KRCRA, and these are determined to be unsuitable.

The exemption for substantial legal and financial commitments and ongoing mining operations does not apply because there are no active leases or operations within the planning area.

**Summary: Criterion 20**—Approximately 10,614 acres are determined to be unsuitable for surface coal mining and surface impacts incident to underground mining.

### **SUMMARY OF THE UNSUITABILITY EVALUATION**

The coal resources with development potential within the KPA have been evaluated based on the 20 criteria of unsuitability. Based on the criteria, the coal resources that are considered unsuitable for surface coal mining or surface operations and impacts incident to underground mining are shown on Map 2. These resources have been determined to be unsuitable based on Criteria 1, 3, 4, 9, 11, 12, 14, 15, 18, and 20. As a result of this analysis, there are approximately 35,538 acres within the KDA that are determined to be unsuitable for surface coal mining or operations and surface impacts incident to underground mining.

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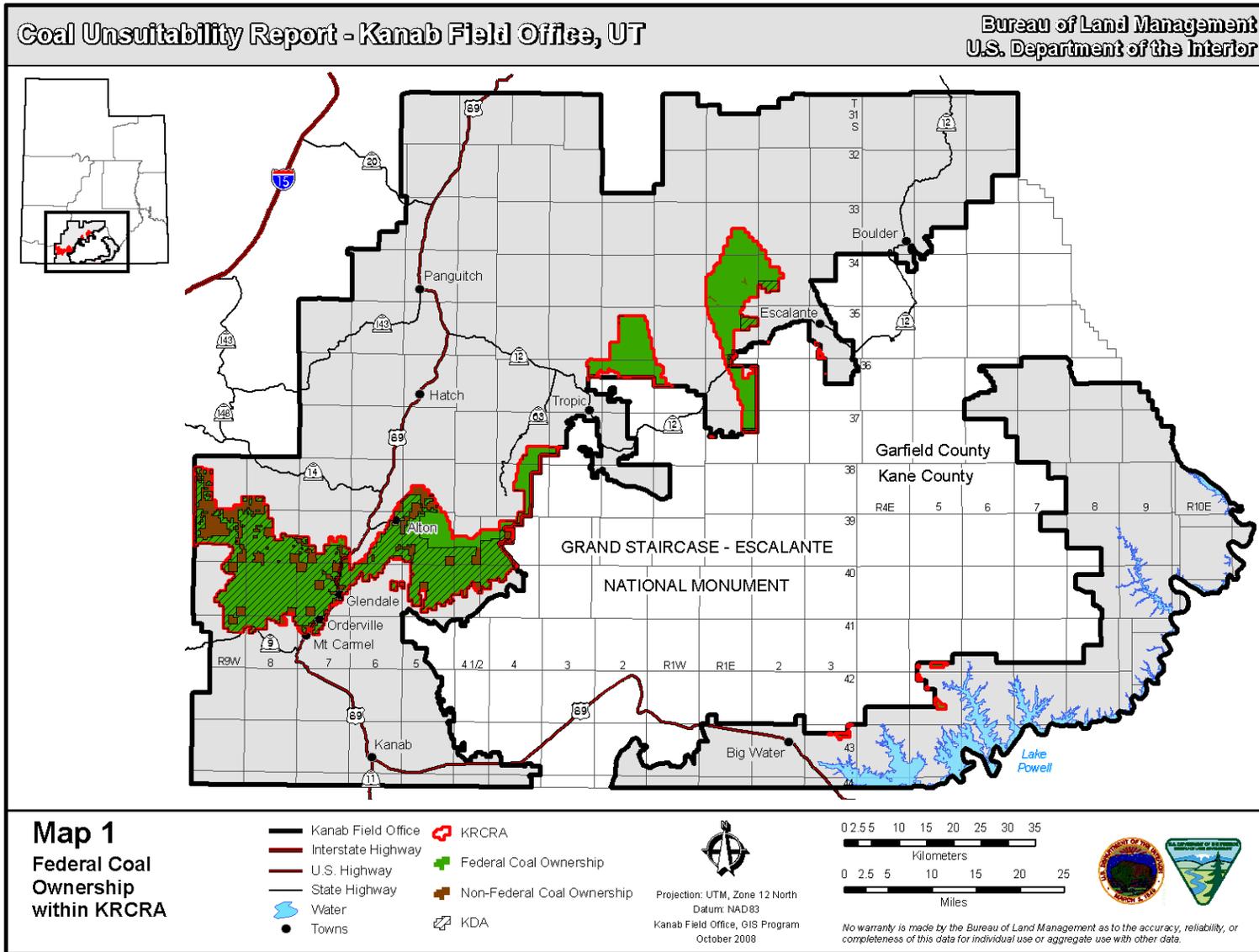
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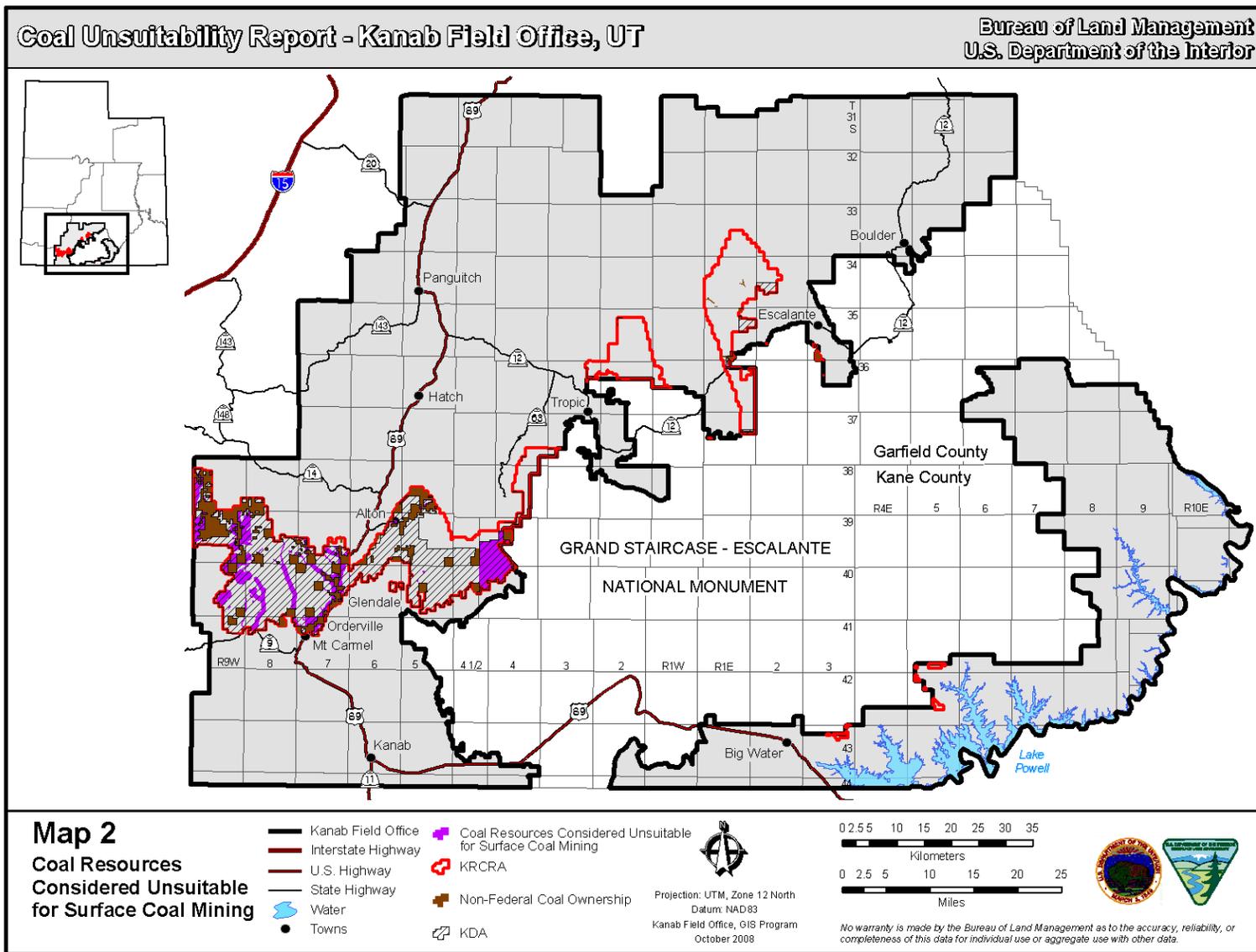
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**MAP 1. FEDERAL COAL OWNERSHIP WITHIN KRCRA**



## MAP 2. COAL RESOURCES CONSIDERED UNSUITABLE FOR SURFACE MINING



## **APPENDIX 7—TRAVEL MANAGEMENT/ROUTE DESIGNATION PROCESS**

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The Kanab Field Office (KFO) used the following process for route designation alternatives during development of the Kanab Resource Management Plan (RMP) and Environmental Impact Statement (EIS). This process included route inventory, interdisciplinary team (ID team) assessment, and cooperating agency coordination.

### **ROUTE INVENTORY**

The KFO conducted a complete route inventory in 2005 and 2006 to develop a route baseline for use in the planning process. Bureau of Land Management (BLM) employees with global positioning system (GPS) equipment digitized the routes while traveling on off-highway vehicles (OHV) and by foot. The digitized route data was verified and prepared for interdisciplinary review. In addition, Garfield County provided route data in a geographic information system (GIS) data layer. Data from the BLM inventory was overlaid with the Garfield County route data, and discrepancies were identified, reviewed, and resolved through ground-truthing and resource specialist review. Kane County provided paper maps with route data. These maps were reviewed, and any additional routes were ground-truthed with GPS and BLM employees. Where GPS data was incomplete, recent aerial photography was inspected to complete GIS datagaps. While inventorying the routes, staff collected surface type and primary and secondary usage associated with each route.

### **INTERDISCIPLINARY TEAM ASSESSMENT**

Team members reviewed the route inventory during a series of ID team meetings. The team made the following assumptions:

- Prohibit motorized vehicle cross-country travel, except in designated open areas
- Close routes (permanently, seasonally, or temporarily) or relocate as appropriate to address resource concerns
- Evaluate parallel, duplicative, or redundant routes for potential closure
- Where routes, trails, or other facilities have been abandoned, provide for restoration and revegetation of the site
- Prohibit motorized use of designated closed routes, except for BLM administrative and emergency use
- Sign and map designated routes as motorized or non-motorized; travel maps should be user friendly and easily accessible
- Existing route designations may be changed pursuant to land management objectives
- The travel management plan should be flexible about the location of new routes needed to provide access for new activities or to new areas or to reduce resource and/or user conflicts
- Where and when appropriate, plan, develop, and designate (in cooperation with user groups and cooperating agencies) new routes and trails that enhance and expand recreational opportunities and encourage responsible use.

The ID team applied the following factors to the route inventory and used other BLM inventories and natural and cultural resource information to identify routes for designation. The team considered the following:

- Environmental sensitivity of the areas surrounding the route, including soil type/condition, riparian areas and their condition, wilderness study areas (WSA), and weeds
- Wildlife habitat sensitivity of the areas surrounding the route, including designated critical habitat, sensitive status species habitat, or crucial habitat
- Current and anticipated visitor use levels and travel and transportation needs and desires
- Management objectives for the area and the potential for user and resource conflicts
- Access needs for BLM-permitted or authorized activities (e.g., range permittees, recreation permittees, and mineral developments)
- Access needs for non-BLM-administered lands
- Cultural resources and specific sites that require protection
- How route designation could be used to reduce existing or anticipated conflict between users
- How route designation would affect setting, recreation activity, and experience opportunities in the area.

## **PLAN MAINTENANCE AND CHANGES TO ROUTE DESIGNATIONS**

The RMP includes indicators that guide future plan maintenance, amendments, or revisions related to OHV area designations or the approved road and trail system within “Limited” areas. Future conditions may require the designation or construction of new routes or closure of routes to better address resources and resource use conflicts. Actual route designations within the “Limited” category can be modified without completing a plan amendment, although compliance with the National Environmental Policy Act of 1969 (NEPA) is still required.

As Instruction Memorandum (IM) 2004-061 notes, plan maintenance can be accomplished through additional analysis and land use planning (e.g., activity level planning). The BLM will collaborate with affected and interested parties in evaluating the designated road and trail network for suitability for active OHV management and envisioning potential changes in the existing system or adding new trails that would help meet current and future demands. In conducting such evaluations, the following factors would be considered:

- Routes suitable for various categories of OHVs (e.g., motorcycles, all-terrain vehicles [ATVs], dune buggies, and 4-wheel-drive touring vehicles) and opportunities for joint trail use
- Needs for parking, trailheads, informational and directional signs, mapping and profiling, and development of brochures or other materials for public dissemination
- Opportunities to tie into existing or planned route networks
- Measures needed to meet the objectives stated in the RMP (e.g., cultural resources, soil resources, special status species, and recreation)
- Public land roads or trails determined to cause considerable adverse effects or to constitute a nuisance or threat to public safety would be considered for relocation or

closure and rehabilitation after appropriate coordination with applicable agencies and partners

- Those areas managed as closed will not be available for new motorized designation or construction.

Regulations at 43 Code of Federal Regulations (CFR) 8342.2 require the BLM to monitor the effects of OHV use. Changes should be made to the Travel Plan based on the information obtained through monitoring. Site-specific NEPA documentation is required for changing the route designations in this Travel Plan.

## **COOPERATING AGENCY COORDINATION**

BLM managers and planners met with cooperating agency representatives to review the inventory and discuss concerns. Maps provided at each meeting were used throughout the discussions. Specifically, Kane County and Garfield County representatives raised concerns regarding routes they claimed under Revised Statute (RS) 2477. In addition, duplicative routes, routes with maintenance concerns, maintenance standards, and access to the counties' resources were discussed in relation to the route inventory.

## **IMPLEMENTATION PROCESS**

Implementation decisions are actions that the BLM takes to implement land use plans (LUP) and generally constitute the BLM's final approval for allowing on-the-ground actions to proceed. These types of decisions, which are based on site-specific planning and NEPA analyses, are subject to the administrative remedies set forth in the regulations that apply to each BLM resource management program. Implementation decisions are not subject to protest under the planning regulations; rather, they are subject to various administrative remedies. Where implementation decisions are made as part of the land use planning process, they are still subject to the appeals process or other administrative review as prescribed by specific resource program regulations after the BLM resolves the protests to LUP decisions and makes a decision to adopt or amend the Approved RMP.

The travel planning and implementation process includes the following:

- Monitoring the transportation system and modifying as appropriate
- A map of roads and trails for all travel modes
- Notations of any limitation for specific roads and trails
- Criteria to select or reject roads and trails in the final travel management network, add new roads or trails, and specify limitations
- Guidelines for management, monitoring, and maintenance of the transportation system
- Needed easements and rights-of-ways (to be issued to the BLM or others) to maintain the existing road and trail network providing public land access.

The Approved RMP completes the initial route designation component of the Travel Management Plan and implementation process. These routes would be the initial basis for signing and enforcement. The Field Office will prioritize additional implementation actions,

resources, and geographic areas based on the Approved RMP goals and objectives and in accordance with the guidelines noted above.

# APPENDIX 8—WILDLAND FIRE RESOURCE PROTECTION MEASURES AND REASONABLE AND PRUDENT MEASURES, TERMS AND CONDITIONS, AND REPORTING REQUIREMENTS IDENTIFIED THROUGH SECTION 7 CONSULTATION

The existing land use plans (LUP) that constitute Alternative A (No Action Alternative) were amended September 26, 2005, with the *Finding of No Significant Impact and Decision Record (UT-USO-04-01) Utah Land Use Plan Amendment for Fire and Fuels Management*. The decisions from that document have been brought forward in their entirety. A majority of the decisions are located in the Management Common to All Alternatives section of the Proposed Resource Management Plan (RMP)/Final Environmental Impact Statement (EIS) Chapter 2 under the Wildland Fire Ecology heading. This appendix contains the remainder of the decisions, in the form of resource protection measures and terms and conditions identified through Section 7 consultation, that were too long to be easily integrated into Chapter 2 of the Proposed RMP/Final EIS.

## RESOURCE PROTECTION MEASURES IDENTIFIED IN THE UTAH LAND USE PLAN AMENDMENT FOR FIRE AND FUELS MANAGEMENT

<b>Applicable Fire Management Practices:</b>		
SUP: Wildfire Suppression	RX: Prescribed Fire	ESR: Emergency Stabilization and Rehabilitation
WFU: Wildland Fire Use for Resource Benefit	NF: Non-Fire Fuel Treatments	
<b>Air</b>		
A-1 Evaluate weather conditions, including wind speed and atmospheric stability, to predict impacts from smoke from prescribed fires and wildland fire use. Coordinate with Utah Department of Environmental Quality for prescribed fires and wildland fire use. (RX, WFU)		
A-2 When using chemical fuels reduction methods, follow all label requirements for herbicide application. (NF)		
<b>Soil and Water</b>		
SW-1 Avoid heavy equipment use on highly erosive soils (soils with low soil loss tolerance), wet or boggy soils, and slopes greater than 30 percent, unless otherwise analyzed and allowed under appropriate National Environmental Policy Act (NEPA) evaluation with implementation of additional erosion control and other soil protection mitigation measures. (SUP, WFU, RX, NF, ESR)		
SW-2 There may be situations where high-intensity fire will occur on sensitive and erosive soil types during wildland fire, wildland fire use, or prescribed fire. If significant areas of soil show evidence of high-severity fire, evaluate the area for soil erosion potential and downstream values at risk and implement appropriate or necessary soil stabilization actions such as mulching or seeding to avoid excessive wind and water erosion. (SUP, WFU, RX)		
SW-3 Complete necessary rehabilitation on firelines or other areas of direct soil disturbance, including but not limited to waterbarring firelines, covering and mulching firelines with slash, tilling and/or subsoiling compacted areas, scarification of vehicle tracks, off-highway vehicles (OHV) closures, and seeding and/or mulching for erosion protection. (SUP, WFU, RX)		
SW-4 When using mechanical fuels reduction treatments, limit tractor and heavy equipment use to periods of low soil moisture to reduce the risk of soil compaction. If this is not practical, evaluate sites post-treatment and, if necessary, implement appropriate remediation, such as subsoiling, as part of the operation. (NF)		

<b>Applicable Fire Management Practices:</b>		
SUP: Wildfire Suppression	RX: Prescribed Fire	ESR: Emergency Stabilization and Rehabilitation
WFU: Wildland Fire Use for Resource Benefit	NF: Non-Fire Fuel Treatments	
SW-5 Treatments such as chaining, plowing, and roller chopping shall be conducted as much as practical on the contour to reduce soil erosion (Bureau of Land Management [BLM] Record of Decision [ROD] 13 Western States Vegetation Treatment EIS 1991). (NF, ESR)		
SW-6 When using chemical fuel reduction treatments follow all label directions, additional mitigations identified in project NEPA evaluation, and the Approved Pesticide Use Proposal. At a minimum, provide a 100-foot-wide riparian buffer strip for aerial application, 25 feet for vehicle application, and 10 feet for hand application. Any deviations must be in accordance with the label. Herbicides would be applied to individual plants within 10 feet of water where application is critical (BLM ROD 13 Western States Vegetation Treatment EIS 1991). (NF)		
SW-7 Avoid heavy equipment in riparian or wetland areas. During fire suppression or wildland fire use, consult a resource advisor before using heavy equipment in riparian or wetland areas. (SUP, WFU, RX, NF, ESR)		
SW-8 Limit ignition within native riparian or wetland areas. Allow low-intensity fire to burn into riparian areas. (RX)		
SW-9 Suppress wildfires consistently with compliance strategies for restoring or maintaining the restoration of water quality impaired (303(d) listed) water bodies. Do not use retardant within 300 feet of water bodies. (SUP, WFU)		
SW-10 Plan and implement projects consistent with compliance strategies for restoring or maintaining the restoration of water quality impaired (303(d) listed) water bodies. Planned activities shall take into account the potential impacts on water quality, including increased water yields that can threaten fisheries and aquatic habitat; improvements at channel crossings; channel stability; and downstream values. Of special concern are small headwaters of moderate to steep watersheds, erosive or saline soils, multiple channel crossings, at-risk fisheries, and downstream residents. (RX, NF, ESR)		
<b>Vegetation</b>		
V-1 When restoring or rehabilitating disturbed rangelands, non-intrusive, non-native plant species are appropriate for use when native species: (1) are not available; (2) are not economically feasible; (3) cannot achieve ecological objectives as well as non-native species; and/or (4) cannot compete with already established native species (Noxious Weeds Executive Order 13112 2/3/1999; BLM Manual 9015; BLM ROD 13 Western States Vegetation Treatment EIS 1991). (RX, NF, ESR)		
V-2 In areas known to have weed infestations, aggressive action will be taken in rehabilitating firelines, seeding and follow-up monitoring, and treatment to reduce the spread of noxious weeds. Monitor burned areas and treat as necessary. All seed used will be tested for purity and for noxious weeds. Seed with noxious weeds will be rejected (ROD 13 Western States Vegetation Treatment EIS 1991). (SUP, WFU, RX, NF, ESR)		
<b>Special Status Species</b>		
SSS-1 Initiate emergency Section 7 consultation with United States Fish and Wildlife Service (USFWS) upon the determination that wildfire suppression may pose a potential threat to any listed threatened or endangered species or adverse modification of designated critical habitat. (SUP)		
SSS-3 Prior to planned fire management actions, survey for listed threatened and endangered and non-listed sensitive species. Initiate Section 7 consultation with USFWS as necessary if proposed project may affect any listed species. Review appropriate management, conservation, and recovery plans and include recovery plan direction into project proposals. For non-listed special status plant and animal species, follow the direction contained in the BLM 6840 Manual. Ensure that any proposed project conserves non-listed sensitive species and their habitats and ensure that any action authorized, funded, or carried out by the BLM does not contribute to the need for any species to become listed. (RX, NF, ESR)		
SSS-4 Follow terms and conditions identified in the Biological Opinion (see section below). (SUP, WFU, RX, NF, ESR)		
<b>Fish and Wildlife</b>		
FW-1 Avoid treatments during nesting, fawning, spawning, or other critical periods for wildlife or fish. (RX, NF, ESR)		
FW-2 Avoid if possible or limit the size of wildland fires in important wildlife habitats such as mule deer winter range and riparian and occupied Greater sage-grouse habitat. Use resource advisors to help prioritize resources and develop Wildland Fire Situation Analyses and Wildland Fire Implementation Plans when important habitats may be impacted. (SUP, WFU)		

<b>Applicable Fire Management Practices:</b>		
SUP: Wildfire Suppression	RX: Prescribed Fire	ESR: Emergency Stabilization and Rehabilitation
WFU: Wildland Fire Use for Resource Benefit	NF: Non-Fire Fuel Treatments	
FW-3 Minimize wildfire size and frequency in sagebrush communities where sage-grouse habitat objectives will not be met if a fire occurs. Prioritize wildfire suppression in sagebrush habitat with an understory of invasive, annual species. Retain unburned islands and patches of sagebrush unless there are compelling safety, private property, and resource protection or control objectives at risk. Minimize burnout operations (to minimize burned acres) in occupied sage-grouse habitats when there are no threats to human life and/or important resources. (SUP)		
FW-4 Establish fuel treatment projects at strategic locations to minimize size of wildfires and to limit further loss of sagebrush. Fuel treatments may include greenstripping to help reduce the spread of wildfires into sagebrush communities. (RX, NF)		
FW-5 Use wildland fire to meet wildlife objectives. Evaluate impacts on sage-grouse habitat in areas where wildland fire use for resource benefit may be implemented. (WFU, RX)		
FW-6 Create small openings in continuous or dense sagebrush (more than 30 percent canopy cover) to create a mosaic of multiple-age classes and associated understory diversity across the landscape to benefit sagebrush-dependent species. (WFU, RX, NF)		
FW-7 On sites that are currently occupied by forests or woodlands, but historically supported sagebrush communities, implement treatments (fire, cutting, chaining, seeding, etc.) to reestablish sagebrush communities. (RX, NF)		
FW-8 Evaluate and monitor burned areas and continue management restrictions until the recovering and/or seeded plant community reflect the desired condition. (SUP, WFU, RX, ESR)		
FW-9 Use the ESR program to apply appropriate post-fire treatments within crucial wildlife habitats, including sage-grouse habitats. Minimize seeding with non-native species that may create a continuous perennial grass cover and restrict establishment of native vegetation. Seed mixtures shall be designed to reestablish important seasonal habitat components for sage-grouse. Leks shall not be reseeded with plants that change the vegetation height previously found on the lek. Forbs shall be stressed in early and late brood-rearing habitats. In situations of limited funds for ESR actions, prioritize rehabilitation of sage-grouse habitats. (ESR)		
<b>Cultural Resources</b>		
CR-1 Cultural resource advisors shall be contacted when fires occur in areas containing sensitive cultural resources. (SUP)		
CR-2 Wildland fire use is discouraged in areas containing sensitive cultural resources. A programmatic agreement is being prepared to cover the finding of adverse effects on cultural resources associated with wildland fire use. (WFU)		
CR-3 Potential impacts of proposed treatment shall be evaluated for compliance with the National Historic Preservation Act (NHPA) and the Utah Statewide Protocol. This shall be conducted prior to the proposed treatment. (RX, NF, ESR)		
<b>Paleontology</b>		
P-1 Planned projects shall be consistent with BLM Manual and Handbook H-8270-1, Chapter III (A) and III (B), to avoid areas where significant fossils are known or predicted to occur or to provide for other mitigation of possible adverse effects. (RX, NF, ESR)		
P-2 In the event that paleontological resources are discovered in the course of surface fire management activities, including fires suppression, efforts shall be made to protect these resources. (SUP, WFU, RX, NF, ESR)		
<b>Forestry</b>		
F-1 Planned projects shall be consistent with Healthy Forest Restoration Act Section 102(e)(2) to maintain or contribute to the restoration of old-growth stands to a pre-fire-suppression condition and to retain large trees contributing to old-growth structure. (SUP, WFU, RX, NF)		
F-2 During planning, evaluate opportunities to use forest and woodland products prior to implementing prescribed fire activities. Include opportunities to use forest and woodland product sales to accomplish non-fire fuel treatments. In forest and woodland stands, consider developing silvicultural prescriptions concurrently with fuel treatment prescriptions. (RX, NF)		

<b>Applicable Fire Management Practices:</b>		
SUP: Wildfire Suppression	RX: Prescribed Fire	ESR: Emergency Stabilization and Rehabilitation
WFU: Wildland Fire Use for Resource Benefit	NF: Non-Fire Fuel Treatments	
<b>Livestock Grazing</b>		
LG-1 Coordinate with permittees regarding the requirements for non-use or rest of treated areas. (SUP, WFU, RX, NF, ESR)		
LG-2 Rangelands that have been burned by wildfire, prescribed fire, or wildland fire use will be ungrazed for a minimum of one complete growing season following the burn. (SUP, WFU, RX)		
LG-3 Rangelands that have been reseeded or otherwise treated to alter vegetative composition, chemically or mechanically, will be ungrazed for a minimum of two complete growing seasons. (RX, NF, ESR)		
<b>Recreation and Visitor Services</b>		
Rec-1 Wildland fire suppression efforts will preferentially protect Special Recreation Management Areas and recreation site infrastructure in line with fire management goals and objectives. (SUP)		
Rec-2 Vehicle tracks created off established routes will be obliterated after fire management actions in order to reduce unauthorized OHV travel. (SUP, WFU, RX, NF, ESR)		
<b>Lands and Realty</b>		
LR-1 Fire management practices will be designed to avoid or otherwise ensure the protection of authorized rights-of-way (ROW) and other facilities located on the public lands, including coordination with holders of major ROW systems within ROW corridors and communication sites. (WFU, RX, NF, ESR)		
LR-2 Fire management actions must not destroy, deface, change, or remove to another place any monument or witness tree of the Public Land Survey System. (SUP, WFU, RX, NF, ESR)		
<b>Hazardous Waste</b>		
HW-1 Recognize hazardous wastes and move fire personnel to a safe distance from dumped chemicals, unexploded ordnance, drug labs, wire burn sites, or any other hazardous wastes. Immediately notify the BLM Field Office HAZMAT coordinator or state HAZMAT coordinator upon discovery of any hazardous materials, following the BLM hazardous materials contingency plan. (SUP, WFU, RX, NF, ESR)		
<b>Mineral Resources</b>		
M-1 A safety buffer shall be maintained between fire management activities and at-risk facilities. (SUP, WFU, RX)		
<b>Wilderness and Wilderness Study Areas</b>		
Wild-1 The use of earth-moving equipment must be authorized by the Field Office manager. (SUP, WFU, RX, ESR)		
Wild-2 Fire management actions will rely on the most effective methods of suppression that are least damaging to wilderness values, other resources, and the environment, while requiring the least expenditure of public funds. (SUP, WFU)		
Wild-3 A resource advisor shall be consulted when fire occurs in Wilderness Areas and Wilderness Study Areas (WSA). (SUP, WFU)		

**U. S. FISH AND WILDLIFE SERVICE INCIDENTAL TAKE STATEMENT, INCLUDING REASONABLE AND PRUDENT MEASURES, TERMS AND CONDITIONS, AND REPORTING REQUIREMENTS FOR ESA SPECIES OF THE BIOLOGICAL OPINION**

The USFWS has completed a biological opinion on the Proposed Action alternative and terms and conditions have been identified as part of that opinion. Together, the resource protection measures and the terms and conditions were incorporated into the Proposed Action to reduce resource conflicts. Species that were addressed in the complete statement contained in the

*Finding of No Significant Impact and Decision Record (UT-USO-04-01) Utah Land Use Plan Amendment for Fire and Fuels Management* that do not occur within the decision area or are not affected by management in the EIS alternatives are not include in the Incidental Take Statement below.

### **Incidental Take Statement**

Section 9 of the ESA, as amended, prohibits take (harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct) of listed species of fish or wildlife without a special exemption. “Harm” is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, or sheltering (50 CFR 173). “Harass” is defined as actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns, which include but are not limited to breeding, feeding, or sheltering (50 CFR 17.3).

No exemption from Section 9 of the Act is granted in this biological opinion. The Bureau of Land Management’s (BLM) implementation of the Land Use Plan Amendment and Five Fire Management Plans is likely to adversely affect listed species. The likelihood of incidental take, and the identification of reasonable and prudent measures (RPM) and terms and conditions to minimize such take, will be addressed in project-level and possibly programmatic-level consultations. Any incidental take and measures to reduce such take cannot be effectively identified at the level of proposed action because of the uncertainty of wildland fire, broad geographic scope, and the lack of site-specific information. Rather, incidental take and RPMs may be identified adequately through subsequent actions subject to Section 7 consultations at the project and/or programmatic scale.

Even though actual take levels are unquantifiable, take will occur through harm and harassment. Therefore, we are providing the following RPMs and terms and conditions to minimize overall take. Implementation of these RPMs and terms and conditions during project planning will also expedite site-specific Section 7 consultation.

### **Reasonable and Prudent Measures**

The USFWS believes that the following RPMs are necessary and appropriate to minimize impacts of incidental take on Utah prairie dog, Southwestern willow flycatcher, California condor, bald eagle, Mexican spotted owl (MSO), and Siler pincushion cactus:

1. The BLM shall implement measures to minimize mortality or injury of federally listed species due to proposed project activities without placing firefighter personnel at risk. The species that were determined likely to be adversely affected by project activities included Utah prairie dog, Southwestern willow flycatcher, California condor, bald eagle, MSO, and Siler pincushion cactus.
2. The BLM shall implement measures to minimize harm to federally listed species through destruction of their suitable or designated critical habitats without placing firefighter personnel at risk. The species’ habitats that were determined likely to be

adversely affected by project activities included Utah prairie dog, Southwestern willow flycatcher, California condor, bald eagle, MSO, and Siler pincushion cactus.

## Terms and Conditions

To be exempt from the prohibitions of Section 9 of the Act, the BLM must comply with the following terms and conditions, which implement the RPMs described above and outline reporting/monitoring requirements. These terms and conditions are non-discretionary. The following terms and conditions apply to all species covered under this biological opinion and are to be implemented in addition to the Applicant Committed Measures described in the Proposed Action.

### General Terms and Conditions

1. To implement RPM 1:
  - a. Before the beginning of each fire season, a threatened and endangered species education program will be presented to all personnel anticipated to be within federally listed species habitats during suppression activities. This program will contain information concerning the biology and distribution of listed species throughout the Fire Management Plan Planning Area, their legal status, fire suppression goals, and restrictions within suitable and critical habitat. Following training, each individual will sign a completion sheet to be placed on file at the local BLM office.
  - b. All project employees (including fire fighting personnel) shall be informed as to the definition of “take,” the potential penalties (up to \$200,000 in fines and 1 year in prison) for taking a species listed under the ESA, and the terms and conditions provided in this biological opinion.
  - c. A qualified resource advisor will be assigned to each wildfire that occurs in or threatens listed species habitat. The resource advisor’s role is to help define goals and objectives for fire suppression efforts and to inform the Incident Commander (IC) of any restrictions, but he or she does not get involved in specific suppression tactics. Resource advisors shall oversee fire suppression and suppression rehabilitation activities in order to ensure that protective measures endorsed by the IC are implemented.
  - d. For pre-planned projects, the authorized officer shall designate an individual as a contact representative who will be responsible for overseeing compliance with the Applicant Committed Measures and terms and conditions contained in this biological opinion, and providing coordination with USFWS. The representative will have the authority to halt activities that may be in violation of these conditions, unless human health and safety or structures are at risk.
  - e. Project-related personnel shall not be permitted to have pets accompany them to the project site.
  - f. If available, maps shall be provided to local dispatch centers showing general locations of listed species. Local BLM or Utah Division of Wildlife Resources (UDWR) biologists shall be consulted for specific locations if fires occur within or near the general locations delineated on the map.



- d. All vehicles shall stay on existing roads within colonies except as stated in (e). Storage of equipment and materials shall not occur within ¼ mile of colonies. Vehicle maintenance shall not occur within these areas.
- e. The resource advisor, biologist, or biological monitor (someone who is either qualified with a biological background or has been trained by the resource advisor) ensures that prairie dogs and their burrows are protected or avoided by walking in front of engines, tracked vehicles, or other firefighting-related vehicles within occupied prairie dog colonies.
- f. Vehicles shall not exceed a speed of 10 miles per hour (cross-country) in occupied Utah prairie dog colonies unless a higher speed is determined to be prudent for safety reasons.
- g. Within colonies, precautions shall be taken to ensure that contamination of the site by fuels, motor oils, grease, etc. does not occur and that such materials are contained and properly disposed of off site. Inadvertent spills of petroleum-based or other toxic materials shall be cleaned up and removed immediately unless they occur during an emergency event (wildfire suppression). In which case the spill shall be cleaned up as soon as practical after the emergency situation is controlled.
- h. Camps associated with fire suppression activities shall be situated outside occupied habitat.
- i. If a dead or injured Utah prairie dog is located, initial notification must be made to the USFWS Division of Law Enforcement, Cedar City, Utah at telephone 435-865-0861 or to the Cedar City office of the UDWR at telephone number 435-865-6100. Instruction for proper handling and disposition of such specimens will be issued by the Division of Law Enforcement. Care must be taken in handling sick or injured animals to ensure effective treatment and care and in handling dead specimens to preserve biological material in the best possible state.

### **Southwestern Willow Flycatcher**

The following terms and conditions are in addition to the general terms and conditions listed above and apply to the Southwestern willow flycatcher:

1. To implement the RPM 1:
  - a. Prior to planned project activities, potentially affected habitat will be surveyed according to USFWS protocol (*A Southwestern Willow Flycatcher Natural History Summary and Survey Protocol; Technical Report NPS/NAUCPRS/NRTR-97/12*).
  - b. Except where fires are active in occupied habitat, minimize unnecessary low-level helicopter flights during the breeding season (April 1 to September 30). If safety allows, approach bucket dip sites at a 90-degree direction to rivers to minimize flight time over the river corridor and occupied riparian habitats. Locate landing sites for helicopters at least ¼ mile from occupied flycatcher habitat unless human safety or property dictates otherwise.
  - c. Minimize use of chainsaws or bulldozers to construct firelines through occupied or suitable habitat except where necessary to reduce the overall acreage of occupied habitat or other important habitat areas that would otherwise be burned.

- d. Implement activities to reduce hazardous fuels or improve riparian habitats (prescribed burning or vegetation treatments) within occupied or unsurveyed suitable habitat for Southwestern willow flycatchers only during the non-breeding season (October 1 to March 31).
2. To implement RPM 2:
    - a. Riparian fuel reduction actions shall be considered as experimental and initially conducted only in unoccupied habitats until the success and ramifications are better understood. Efficacy of these actions as a fire management tool, and effects on bird habitat quality, shall be tested in a scientifically explicit, controlled fashion (Appendix L in USFWS 2002).
    - b. In occupied or suitable flycatcher habitat, creation of firebreaks might render the habitat unsuitable (Appendix L in USFWS 2002). As long as human safety and property allows, firebreaks shall be conducted in unoccupied sites, outside of proposed critical habitat, or within proposed critical habitat under the following situations:
      - c. The habitat does not meet the Primary Constituent Elements of the proposed critical habitat as listed in 69 FR 60706-60786, October 12, 2004.
      - d. The firebreak is a minimal fireline necessary to prevent unacceptable losses of occupied habitat.
      - e. The firebreak is between fuel concentrations and flycatcher breeding sites to prevent fires from spreading into breeding sites (Appendix L in USFWS 2002).
      - f. Prescribed fire shall be avoided in occupied habitat and considered only as experimental management techniques if dealing with suitable unoccupied habitat (Appendix L in USFWS 2002).
      - g. Fires in occupied habitat and adjacent buffer zones shall be rapidly suppressed if safety allows.

### **California Condor and Bald Eagle**

The following terms and conditions are in addition to the general terms and conditions listed above and apply to the California condor and bald eagle:

1. To implement RPM 1:
  - a. If California condors or bald eagles are found inhabiting (nesting) within the action area of a pre-planned project, a buffer of 1 mile surrounding the nesting area will be designated as non-treatment zones (Romin and Muck 2002).
  - b. If California condors are observed within ¼ mile of an open water source, such as an inflatable storage tank or “pumpkin,” the water storage tank will be covered when not in use.

### **Mexican Spotted Owl**

The following terms and conditions are in addition to the general terms and conditions listed above and apply to the MSO:

1. To implement RPM 1:
  - a. Pre-planned fuels reduction projects within MSO designated critical habitat shall be designed to enhance habitat requirements for the MSO as well as for the valuable prey species they rely upon.
2. To implement RPM 2:
  - a. Fire suppression shall be considered for wildfires in designated critical habitat.

### **Threatened or Endangered Plants**

The following terms and conditions are in addition to the general terms and conditions listed above and apply to the federally listed plants:

1. To implement RPM 1:
  - a. Do not allow wildland fire use within occupied habitat unless agreed to by the BLM and the USFWS.
  - b. When feasible (and human life or property are not put at risk) firebreaks shall be constructed down-slope of plants and populations; if firebreaks must be sited up-slope, buffers of 100 feet minimum between surface disturbances and plants and populations will be incorporated.
2. To implement RPM 2:
  - a. Do not allow wildland fire use within occupied habitat unless agreed to by the BLM and the USFWS.
  - b. For pre-planned projects within known or potential habitat, site inventories shall be conducted to determine habitat suitability prior to initiation of project activities at a time when the plant can be detected.
  - c. For riparian/wetland-associated species, avoid loss or disturbance of riparian habitats.
  - d. Limit disturbances to and within suitable habitat by staying on designated routes where feasible.
  - e. Limit new access routes created by the project.
  - f. Following a wildland fire event, place signing to limit all-terrain vehicle (ATV) travel in sensitive burned areas.

### **Siler Pincushion Cactus**

The following terms and conditions are in addition to the general terms and conditions listed above as well as the terms and conditions for threatened and endangered plant species. These terms and conditions apply specifically to the Siler pincushion cactus:

1. To implement RPMs 1 and 2:
  - a. Follow and implement the restrictions on pesticide use within suitable Siler pincushion cactus habitat developed by the Environmental Protection Agency (EPA). These limitations were excerpted from the EPA's Pesticides: Endangered Species Protection Program (<http://www.epa.gov/oppead/1/endanger/arizona/cocon.htm#brady>):
    - i. If the active ingredient is 2,4-D (all forms), ATRAZINE, CLOPYRALID, DICAMBA (all forms), DICHLORPROP (2,4-DP), HEXAZINONE, MCPA (all forms), PARAQUAT, PICLORAM (all forms), or TEBUTHIURON, do not apply

- this pesticide in the species habitat. For ground applications do not apply within 20 yards of the habitat, or within 100 yards for aerial applications.
- ii. If the active ingredient is OXYFLUORFEN (granular or non-granular), do not apply this pesticide in the species habitat. For ground applications do not apply within 100 yards of the habitat, or within ¼ mile for aerial applications.
  - iii. If the active ingredient is either METRIBUZIN or SULFOMETURON METHYL, do not apply this pesticide on rights-of-way in the species habitat.

## Closing

The USFWS believes that an unquantifiable amount of incidental take will occur in the form of harm and harassment as a result of the proposed actions. The RPMs, with their implementing terms and conditions, are designed to minimize the impact of incidental take that might otherwise result from the proposed actions. The BLM must immediately provide an explanation of the causes of the taking and review with the USFWS the need for possible modification of the RPMs.

## Reporting Requirements

Upon locating dead, injured, or sick listed species, immediate notification must be made to the USFWS Salt Lake City Field Office at 801-975-3330 and the USFWS Division of Law Enforcement, Ogden, Utah, at 801-625-5570. Pertinent information including the date, time, location, and possible cause of injury or mortality of each species shall be recorded and provided to the USFWS. Instructions for proper care, handling, transport, and disposition of such specimens will be issued by the USFWS Division of Law Enforcement. Care must be taken in handling sick or injured animals to ensure effective treatment and care and in handling dead specimens to preserve biological material in the best possible state.

The BLM shall submit a report to the USFWS on or before December 1 of each year in which fire management activities occurred within occupied habitat. For the listed and candidate species covered under this consultation, the report shall include (1) the amount of potential and/or occupied habitat affected by wildfire (i.e., stream miles burned, percentage of drainage burned, and fire severity map); (2) to the extent possible, the number of individuals killed from direct and indirect effects of wildfire; (3) any habitat and/or population monitoring efforts from past wildfire events; (4) a copy of the burned area emergency stabilization and rehabilitation plan; (5) implementation and effectiveness monitoring of burned area emergency stabilization and rehabilitation treatments; (6) implementation and effectiveness monitoring of the standard operating procedures (SOP); (7) recommendations for enhancing the effectiveness of the SOPs; and (8) any recommendations for additional SOPs. The first report shall be due to the USFWS on December 1, 2005. The address for the Utah Fish and Wildlife Office is:

Field Supervisor, U.S. Fish and Wildlife Service  
2369 West Orton Circle, Suite 50  
West Valley City, Utah 84119  
Telephone: 801-975-3330

## **ADDITIONAL RESOURCE PROTECTION MEASURES DEVELOPED BY THE BLM AND THE USFWS**

In addition to the resource protection measures listed in the LUP amendment, the following conservation measures were developed through the Section 7 consultation process. These resource protection measures were identified in the USFWS Biological Opinion (page 42). That document states that “the BLM has incorporated these measures ... by reference to their [Biological Assessment].” Species that were addressed in these measures that do not occur within the decision area or are not affected by management in the EIS alternatives are not included. Additional resource protection measures are as follows:

- Manage natural and prescribed fire regimes to protect or improve Utah prairie dog habitat.
- Within Utah prairie dog habitat, reseedling would be implemented according to the Utah Prairie Dog Recovery Plan.
- Manage prescribed fire and wildland fire use within MSO protected activity centers (PAC) to ensure protection of nesting, roosting, and foraging habitats.
- Wildland fire suppression would be prioritized for use in MSO PACs. When feasible, fire camps associated with suppression efforts would be built outside of the PACs and nest protection areas.
- For treatments within suitable habitat for listed species, pre- and post-monitoring would take place as determined on a case-by-case basis.
- Incorporate the standards and guidelines recommended by the Inland Native Fish Strategy (USFS 1995).
- As per the decision of the resource advisor, avoid construction of firelines using mechanized equipment across the stream channel. If used, the mechanized equipment would terminate at and not cross the stream channel.
- Avoid transferring water from one watershed into another for the purpose of water drops because this could aid in the spread of waterborne diseases such as whirling disease.
- Avoid retardant use in any riparian wetland communities.
- Restricted use of mechanical treatments and hand tools.
- Per-burn acreage limitations of 5 to 100 acres, as long as human life or property are not threatened.
- Prior to planned fire management actions, survey for listed threatened and endangered and non-listed sensitive species. Review appropriate management, conservation, and recovery plans and include recovery plan direction into project proposals, if listed. Ensure that any proposed project conserves non-listed sensitive species and their habitats and ensure that any action authorized, funded, or carried out by the BLM does not contribute to the need for any species to become listed.

# APPENDIX 9—CONSERVATION MEASURES, OIL AND GAS LEASE NOTICES, AND RECOVERY PLANS FOR THREATENED AND ENDANGERED SPECIES

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## SPECIFIC THREATENED/ENDANGERED SPECIES CONSERVATION MEASURES

The Utah Bureau of Land Management (BLM) is committed to the conservation of federally listed species. Pursuant to the Endangered Species Act (ESA), this means that the BLM will use methods and procedures necessary for improving the status of federally listed species and their habitats to a point at which the provisions of the ESA are no longer necessary. This effort includes ensuring that BLM actions requiring permit or approval are consistent with the objectives of approved recovery plans for listed species.

This list of conservation measures is part of the programmatic Section 7 consultation effort concerning existing land use plans (LUP) (Alternative A) in the decision area. To address the potential impacts of common land uses and to minimize the potential for their occurrence, the BLM, in coordination with the U.S. Fish and Wildlife Service (USFWS), has developed the following list of species-specific conservation measures for all future proposed actions involving BLM Utah.

Future implementation proposals that are determined to have potential for impacts on these listed species should incorporate these conservation measures where applicable and appropriate. Where these measures are incorporated into future proposals, there is a greater likelihood that the BLM will meet the standard of “may affect, but not likely to adversely affect” species listed under the ESA. Where the BLM determines that deviation, modification, or waiver of these conservation measures would be prudent or necessary, early coordination and Section 7 consultation with USFWS would be necessary. The BLM will reinitiate Section 7 consultation at the project level as necessary to ensure proper management of listed species.

### **Bald Eagle (*Haliaeetus leucocephalus*)**

The following list of measures provides species-specific guidance, intended to avoid, minimize, or reduce potential adverse impacts from implementation of BLM actions under the authority of current Utah BLM LUPs on the bald eagle. This list is not comprehensive. Additional conservation measures or other modified versions of these measures may be applied for any given BLM-authorized activity upon further analysis, review, coordination efforts, and/or appropriate levels of Section 7 consultation with the USFWS:

1. The BLM will place restrictions on all authorized (i.e., permitted) activities that may adversely impact bald eagles, their breeding habitat, roosting sites, and known winter concentration areas in order to avoid or minimize potential impacts:
  - Measures have been adapted from guidance published in the *Utah Field Office Guidelines for Raptor Protection from Human and Land Use Disturbances* (Romin & Muck 2002), as well as coordination between the BLM and USFWS.

Measures include, but may not be limited to seasonal/daily timing limitations and/or spatial buffers as follows:

- ♦ Temporary activities<sup>1</sup> or habitat alterations that may disturb nesting bald eagles will be restricted from January 1 to August 31 within 1 mile of bald eagle nest sites. Exceptions may be granted where no nesting behavior is initiated prior to June 1.
- ♦ Temporary activities or habitat alterations that may disturb bald eagles will be restricted within ½ mile of known winter concentration areas from November 1 to March 31. Where daily activities must occur within these spatial buffers and are approved through subsequent consultation, activities should also be properly scheduled to occur after 9 a.m. and terminate at least 1 hour before official sunset to ensure that bald eagles using these roosts are allowed the opportunity to vacate their roost in the morning and return undisturbed in the evening.
- ♦ No permanent<sup>2</sup> infrastructure will be placed within 1 mile of bald eagle nest sites or within ½ mile of bald eagle winter concentration areas.
- ♦ Where activities are authorized within breeding habitats or known winter concentration areas, monitoring efforts would document what, if any, impacts occur during project implementation, and to what extent the species was affected. The results of these monitoring efforts would be carried forward in the design and implementation of future projects as part of the adaptive management process.

2. For all project-related survey and monitoring actions:

- Reports must be provided to affected field offices within 15 days of completion of survey or monitoring efforts. Reports must follow field office guidance for BLM-specified formats for written and automated databases.
  - Any detection of bald eagle presence during survey or monitoring efforts must be reported to the authorized officer within 48 hours of detection.
3. Appropriately timed surveys in suitable bald eagle nesting habitat or identified concentration areas shall be conducted in accordance with approved protocols prior to any activities that may disturb bald eagles. Surveys would be conducted only by BLM-approved individuals or personnel.
  4. BLM shall, in coordination with cooperating agencies and/or partners (e.g., Utah Division of Wildlife Resources [UDWR] and USFWS), verify annual status (active versus inactive) of all known bald eagle nests and other identified concentration areas on BLM-administered lands.
  5. When project proposals that may affect threatened and endangered species are received, the BLM will coordinate with the USFWS at the earliest possible date so that the USFWS can provide necessary information to minimize or avoid the need to redesign projects at a later date to include conservation measures that may be determined as appropriate by the USFWS.
  6. BLM-administered lands within 1 mile of bald eagle nests, or identified communal winter roosts, should not be exchanged or sold. If it is imperative that these lands be transferred out of BLM ownership, then every effort should be made to include conservation easements or voluntary conservation restrictions to protect the bald eagles and support their conservation.

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<sup>1</sup> Temporary activities are defined as those that are completed prior to the start of the following raptor breeding season, leaving no permanent structures, and resulting in no permanent habitat loss.

<sup>2</sup> Permanent activities continue for more than one breeding season and/or cause a loss of habitat or displace individuals through disturbances (e.g., creation of a permanent structure including, but not limited to, well pads, roads, pipelines, and electrical power lines).

7. Proponents of BLM-authorized actions will be advised that roadside carrion can attract foraging bald eagles and potentially increase the risk of vehicle collisions with individual bald eagles feeding on carrion. When carrion occurs on the road, appropriate officials will be notified for necessary removal.
8. Power lines will be built to standards and guidelines identified in the *Avian Protection Plan* (APP).
9. The BLM will make educational information available to project proponents and the general public pertaining to the following topics:
  - Appropriate vehicle speeds and the associated benefit of reduced vehicle collisions with wildlife
  - Use of lead shot (particularly over water bodies)
  - Use of lead fishing weights
  - General ecological awareness of habitat disturbance
10. Because bald eagles are often dependent on aquatic species as prey items, the BLM will periodically review existing water quality records (e.g., Utah Department of Environmental Quality [UDEQ], UDWR, and U.S. Geological Survey [USGS]) from monitoring stations on or near important bald eagle habitats (i.e., nests, roosts, and concentration areas) on BLM lands for any conditions that could adversely affect bald eagles or their prey. If water quality problems are identified, the BLM will contact the appropriate jurisdictional entity to cooperatively monitor the condition and/or take corrective action.

### **Mexican Spotted Owl (*Strix occidentalis lucida*)**

The following list of measures provides species-specific guidance intended to avoid, minimize, or reduce potential adverse impacts from implementation of BLM actions under the authority of current Utah BLM LUPs on the Mexican spotted owl (MSO). This list is not comprehensive. Additional conservation measures or other modified versions of these measures may be applied for any given BLM-authorized activity upon further analysis, review, coordination efforts, and/or appropriate levels of Section 7 consultation with the USFWS:

1. The BLM will place restrictions on all authorized (permitted) activities that may adversely affect the MSO in identified protected activity centers (PAC), breeding habitat, or designated critical habitat in order to reduce the potential for adverse impacts to the species:
  - Restrictions and procedures have been adapted from guidance published in the *Utah Field Office Guidelines for Raptor Protection from Human and Land Use Disturbances* (Romin & Muck 2002), as well as coordination between the BLM and USFWS. Measures include:
    - ◆ Surveys, according to USFWS protocol, will be required prior to any disturbance-related activities that have been identified to have the potential to impact MSO, unless current species occupancy and distribution information is complete and available. All surveys must be conducted by USFWS-certified individuals and approved by the BLM authorized officer:
      - ◇ Assess habitat suitability for nesting and foraging using accepted habitat models in conjunction with field reviews. Apply the appropriate conservation

measures below if project activities occur within ½ mile of suitable owl habitat, dependent in part on whether the action is temporary<sup>3</sup> or permanent<sup>4</sup>:

- For all temporary actions that may impact owls or suitable habitat:
    - If action occurs entirely outside of the owl breeding season and leaves no permanent structure or permanent habitat disturbance, action can proceed without an occupancy survey.
    - If action will occur during a breeding season, survey for owls prior to commencing activity. If owls are found, activity should be delayed until outside of the breeding season.
    - Eliminate access routes created by a project through such means as raking out scars, revegetation, and gating access points.
  - For all permanent actions that may impact owls or suitable habitat:
    - Survey two consecutive years for owls according to established protocol prior to commencing activity.
      - a. If owls are found, no actions will occur within ½ mile of identified nest site. If nest site is unknown, no activity will occur within the designated PACs.
      - b. Avoid placing permanent structures within ½ mile of suitable habitat unless surveyed and not occupied.
      - c. Reduce noise emissions (e.g., use hospital-grade mufflers) to 45 dBA at ½ mile from suitable habitat, including canyon rims (Delaney et al. 1997). Placement of permanent noise-generating facilities should be determined by a noise analysis to ensure noise does not encroach upon a ½-mile buffer for suitable habitat, including canyon rims.
      - d. Limit disturbances to and within suitable owl habitat by staying on designated routes.
      - e. Limit new access routes created by the project.
2. The BLM will, as a condition of approval (COA) on any project proposed within identified PACs and designated critical habitat or within spatial buffers for MSO nests (½ mile), ensure that project proponents are notified as to their responsibilities for rehabilitation of temporary access routes and other temporary surface disturbances created by their project according to individual BLM field office standards and procedures or those determined in the project-specific Section 7 consultation.
  3. The BLM will require monitoring of activities in designated critical habitat, identified PACs, or breeding habitats wherein it has been determined that there is a potential for take. If any adverse impacts are observed to occur in a manner or to an extent that was not considered in the project-specific Section 7 consultation, then consultation must be reinitiated:
    - Monitoring results should document what, if any, impacts on individuals or habitat occur during project construction/implementation. In addition, monitoring should

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<sup>3</sup> Temporary activities are defined as those that are completed prior to the start of the following raptor breeding season, leaving no permanent structures, and resulting in no permanent habitat loss.

<sup>4</sup> Permanent activities continue for more than one breeding season and/or cause a loss of owl habitat or displace owls through disturbances (e.g., creation of a permanent structure including but not limited to well pads, roads, pipelines, and electrical powerlines).

document successes or failures of any impact minimization or mitigation measures. Monitoring results would be considered an opportunity for adaptive management, and as such would be carried forward in the design and implementation of future projects.

4. For all survey and monitoring actions:
  - Provide reports to the affected field offices within 15 days of completion of survey or monitoring efforts.
  - Report any detection of MSO during survey or monitoring activities to the authorized officer within 48 hours.
5. The BLM will, in areas of designated critical habitat, ensure that any physical or biological factors (i.e., the primary constituent elements), as identified in determining and designating such habitat, remain intact during implementation of any BLM-authorized activity.
6. For all BLM actions that “may adversely affect” the primary constituent elements in any suitable MSO habitat, the BLM will implement measures as appropriate to minimize habitat loss or fragmentation, including rehabilitation of access routes created by the project through such means as raking out scars, revegetation, and gating access points.
7. Where technically and economically feasible, use directional drilling from single drilling pads to reduce surface disturbance, and minimize or eliminate need to drill in canyon habitats suitable for MSO nesting.
8. Prior to surface disturbing activities in MSO PACs, breeding habitats, or designated critical habitat, specific principles should be considered to control erosion. These principles include:
  - Conduct long-range transportation planning for large areas to ensure that roads will serve future needs. This will result in less total surface disturbance.
  - Avoid surface disturbance in areas with high erosion hazards to the extent possible. Avoid mid-slope locations, headwalls at the source of tributary drainages, inner valley gorges, and excessively wet slopes such as those near springs. In addition, areas where large cuts and fills would be required should be avoided.
  - Locate roads to minimize roadway drainage areas and to avoid modifying the natural drainage areas of small streams.
9. Project developments should be designed and located to avoid direct or indirect loss or modification of MSO nesting and/or identified roosting habitats.
10. Water production associated with BLM-authorized actions should be managed to ensure maintenance or enhancement of riparian habitats.

### **Utah Prairie Dog (*Cynomys parvidens*)**

The following list of measures provides species-specific guidance intended to avoid, minimize, or reduce potential adverse impacts from implementation of BLM actions under the authority of current Utah BLM LUPs on the Utah prairie dog. This list is not comprehensive. Additional conservation measures or other modified versions of these measures may be applied for any given BLM-authorized activity upon further analysis, review, coordination efforts, and/or appropriate levels of Section 7 consultation with the USFWS:

1. Surveys according to approved protocols and procedures will be required prior to surface disturbance unless species occupancy and distribution information is complete, current,

and available. Surveys would be conducted by BLM-approved biologists. In the event species occurrence is verified, the project proponent may be required to modify operational plans, at the discretion of the authorized officer, to include additional, appropriate protection measures or practices for the minimization of impacts on the Utah prairie dog and its habitat.

2. The BLM will restrict surface disturbing activities within ½ mile of active Utah prairie dog colonies when and where necessary, upon the recommendation of BLM Field Office (FO) staff biologists to BLM management and as necessary in coordination or consultation with USFWS.
3. No permanent surface disturbance or facility will be allowed within ½ mile of potentially suitable Utah prairie dog habitat, as identified and mapped by the BLM or UDWR since 1976.
4. Unavoidable surface disturbing activities in Utah prairie dog habitat should be conducted between April 1 and September 30 (the period when prairie dogs are most likely to be found above ground). BLM projects will be designed to avoid direct disturbance to Utah prairie dog populations and habitat wherever possible. Designs should consider flow of water, slope, buffers, possible fencing, and pre-activity flagging of critical areas for avoidance.
5. Reclamation and restoration efforts in Utah prairie dog habitat will be conducted using native seed unless otherwise specified in coordination with USFWS.
6. As funding allows, the BLM should complete a comprehensive assessment locating and mapping off-highway vehicle (OHV) use areas that interface with Utah prairie dog populations. Comparison of geographic information system (GIS) layers for Utah prairie dog populations and OHV use should give BLM personnel another tool to manage and/or minimize impacts from OHV use near known Utah prairie dog populations and habitat. Based on the information that is developed via GIS applications, appropriate actions should be taken to prevent OHV use in occupied territories.
7. The BLM will consider emergency OHV closure or additional restrictions to protect, conserve, and recover the species.
8. Where technically and economically feasible, the use of directional drilling or drilling of multiple wells from a single pad will be required to reduce surface disturbance in Utah prairie dog habitat.
9. For existing facilities, BLM and facility operators will consider if fencing infrastructure on well pads (e.g., drill pads, tank batteries, and compressors) would be needed to protect equipment from burrowing activities. In addition, BLM and project proponents should consider if future surface disturbing activities would be required at the site.
10. The BLM will provide educational information for project proponents and the general public pertaining to appropriate vehicle speeds and the associated benefit of reduced vehicle collisions with wildlife, and to improve general ecological awareness of habitat disturbance.
11. Project-related vehicle maintenance activities will be conducted in maintenance facilities. Should it become necessary to perform vehicle or equipment maintenance on site, these activities will not be conducted on identified Utah prairie dog colonies or within a 350-foot distance from colonies. Precautions shall be taken to ensure that contamination of maintenance sites by fuels, motor oils, grease, etc. does not occur and such materials are

contained and properly disposed of off site. Inadvertent spills of petroleum-based or other toxic materials shall be cleaned up and removed immediately.

12. The BLM will coordinate with interested private and governmental agencies and landowners to identify voluntary opportunities to modify current land stewardship practices that may have detrimental impacts on the Utah prairie dog and its habitat.
13. BLM-authorized equipment and vehicles planned for use within Utah prairie dog habitat will be cleaned to minimize the spread of noxious weeds or other undesirable vegetation types.

### **Southwestern Willow Flycatcher (*Empidonax trailii extimus*)**

The following list of measures provides species-specific guidance intended to avoid, minimize, or reduce potential adverse impacts from implementation of BLM actions under the authority of current Utah BLM LUPs on the Southwestern willow flycatcher. This list is not comprehensive. Additional conservation measures or other modified versions of these measures may be applied for any given BLM-authorized activity upon further analysis, review, coordination efforts, and/or appropriate levels of Section 7 consultation with the USFWS:

1. Surveys will be required prior to operations that “may adversely affect” Southwestern willow flycatcher unless species occupancy data and distribution information is complete and available. Surveys will be conducted only by BLM-approved personnel. In the event species occurrence is verified, project proponents may be required to modify operational plans at the discretion of the authorized officer. Modifications may include appropriate measures for minimization of adverse effects on Southwestern willow flycatcher and habitat.
2. The BLM will monitor and restrict, when and where necessary, authorized or casual use activities that “may adversely affect” Southwestern willow flycatcher, including but not limited to recreation, mining, and oil and gas activities. Monitoring results should be considered in the design and implementation of future projects.
3. To monitor the impacts of BLM-authorized projects determined “likely to adversely affect” Southwestern willow flycatcher, the BLM should prepare a short report describing progress, including success of implementation of all associated mitigation. Reports shall be submitted annually to the USFWS Utah Field Office by March 1 beginning 1 full year from date of implementation of the proposed action. The report shall list and describe the following items:
  - Any unforeseen adverse effects resulting from activities of each site-specific project (may also require reinitiation of formal consultation)
  - If and when any level of anticipated incidental take is approached (as allowed by separate Incidental Take Statements of site-specific Formal Section 7 consultation efforts)
  - If and when the level of anticipated take (as allowed by separate Incidental Take Statements from site-specific formal consultations) is exceeded
  - Results of annual, periodic monitoring that evaluates the effectiveness of the reasonable and prudent measures or terms and conditions of the site-specific consultation.
4. The BLM should avoid granting activity permits or authorizing development actions in Southwestern willow flycatcher habitat. Unoccupied potential habitat should be protected

in order to preserve them for future management actions associated with the recovery of the Southwestern willow flycatcher.

5. The BLM will ensure that the project design incorporates measures to avoid direct disturbance to populations and suitable habitats where possible. At a minimum, project designs should include consideration of water flows, slope, seasonal and spatial buffers, possible fencing, and pre-activity flagging of critical areas for avoidance.
6. The BLM will continue to address illegal and unauthorized OHV use and activity upon BLM-administered lands. To protect, conserve, and recover the Southwestern willow flycatcher in areas of heavy unauthorized use, temporary closures or use restrictions beyond those which are already in place may be imposed. As funding allows, the BLM should complete a comprehensive assessment of all OHV use areas that interface with Southwestern willow flycatcher populations. Comparison of Southwestern willow flycatcher populations and OHV use areas using GIS would give BLM personnel another tool to manage and/or minimize impacts.
7. All surface disturbing activities should be restricted within a ¼ mile buffer from suitable riparian habitats, and permanent surface disturbances should be avoided within ½ mile of suitable Southwestern willow flycatcher habitat:
  - Unavoidable ground disturbing activities in occupied Southwestern willow flycatcher habitat should be conducted only when preceded by current year survey, should only occur between August 16 and April 30 (the period when Southwestern willow flycatchers are not likely to be breeding), and should be monitored to ensure that adverse impacts on Southwestern willow flycatcher are minimized or avoided and to document the success of project-specific mitigation/protection measures. As monitoring is relatively undefined, project-specific requirements must be identified.
8. The BLM will properly consider nesting periods for Southwestern willow flycatcher when conducting horse-gathering operations in the vicinity of habitat.
9. The BLM will ensure that plans for water extraction and disposal are designed to avoid changes in the hydrologic regime that would be likely to result in loss or undue degradation of riparian habitat.
10. Native species will be preferred over non-native for revegetation of habitat in disturbed areas.
11. The BLM will coordinate with other agencies and private landowners to identify voluntary opportunities to modify current land stewardship practices that may impact the Southwestern willow flycatcher and its habitats.
12. Limit disturbances to within suitable habitat by staying on designated routes.
13. Ground disturbing activities will require monitoring throughout the duration of the project to ensure that adverse impacts on Southwestern willow flycatcher are avoided. Monitoring results should document what if any impacts on individuals or habitat occur during project construction/implementation. In addition, monitoring should document the successes or failures of any impact minimization or mitigation measures. Monitoring results would be considered an opportunity for adaptive management and as such would be carried forward in the design and implementation of future projects.
14. Where technically and economically feasible, use directional drilling or multiple wells from the same pad to reduce surface disturbance and eliminate drilling in Southwestern willow flycatcher habitat.

15. Habitat disturbances (e.g., organized recreational activities requiring special use permits or drilling activities) will be avoided within ¼ mile of suitable Southwestern willow flycatcher habitat from May 1 to August 15.
16. Grazing allotments that contain habitat for the species will be managed with consideration for recommendations provided by the *Southwestern Willow Flycatcher Recovery Plan* and other applicable research.

## **OIL AND GAS LEASE NOTICES FOR SPECIAL STATUS SPECIES HABITAT**

The BLM recognizes that nondiscretionary statutes such as the ESA may require conditions of approval that affect lease economics or even require disapproval of certain operations. Instruction Memorandum (IM) 2002-174 directs all BLM State Offices to “include the [following] lease stipulation on oil and gas leases where threatened, endangered, or other special status species or critical habitat is known or strongly suspected.” Management actions in Chapter 2 include actions that would implement the following language:

*The lease area may now or hereafter contain plants, animals, or their habitats determined to be threatened, endangered, or other special status species. BLM may recommend modifications to exploration and development proposals to further its conservation and management objective to avoid BLM-approved activity that will contribute to a need to list such a species or their habitat. BLM may require modifications to or disapprove proposed activity that is likely to result in jeopardy to the continued existence of a proposed or listed threatened or endangered species or result in the destruction or adverse modification of a designated or proposed critical habitat. BLM will not approve any ground disturbing activity that may affect any such species or critical habitat until it completes its obligations under applicable requirements of the Endangered Species Act as amended, 16 U.S.C. 1531 et seq., including completion of any required procedure for conference or consultation.*

IM 2002-174 also directs State Offices to “provide a separate notification to prospective lessees identifying the particular special status species that are present on the lease parcel offered. This information is to be provided through a lease notice and not by lease stipulation (unless otherwise provided in current LUPs). This stipulation would now be attached to most oil and gas leases issued by the Bureau, including areas identified in LUPs as open to standard lease terms and conditions.”

Utah IM-UT-2005-089 identifies interim policy for ESA Section 7 consultation procedures for the issuance of oil and gas lease parcels that will help ensure that Utah BLM is in compliance with ESA consultation requirements for this program. In December 2004, the BLM and USFWS personnel completed work on a set of lease notices for specific listed species that are to be attached to oil and gas leases offered in the state. On December 13, 2004, Section 7 consultation was initiated with the submission of a memorandum to the USFWS containing the lease notices. USFWS responded with a memorandum dated December 16, 2004, concurring with the BLM determination that use of the species-specific lease notices on appropriate lease parcels “may affect,” but would be “not likely to adversely affect” listed species in the state. The following species-specific lease notice or notices should be attached, as appropriate, to any oil or gas lease that may contain a listed species or its habitat prior to the lease being offered for sale.

## Lease Notice—Bald Eagle

The lessee/operator is given notice that the lands in this parcel contain nesting/winter roost habitat for the bald eagle, a federally listed species. Avoidance or use restrictions may be placed on portions of the lease. Application of appropriate measures will depend on whether the action is temporary or permanent and whether it occurs within or outside the bald eagle breeding or roosting season. A *temporary* action is completed prior to the following breeding or roosting season, leaving no permanent structures and resulting in no permanent habitat loss. A *permanent* action continues for more than one breeding or roosting season and/or causes a loss of eagle habitat or displaces eagles through disturbances (i.e., creation of a permanent structure). The following avoidance and minimization measures have been designed to ensure activities carried out on the lease are in compliance with the ESA. Integration of and adherence to these measures will facilitate review and analysis of any submitted permits under the authority of this lease. Adhering to these measures could reduce the scope of Section 7 consultation at the permit stage.

Current avoidance and minimization measures include the following:

1. Surveys will be required prior to operations unless species occupancy and distribution information is complete and available. All surveys must be conducted by qualified individuals and according to protocol.
2. Lease activities will require monitoring throughout the duration of the project. To ensure desired results are being achieved, minimization measures will be evaluated and, if necessary, Section 7 consultation reinitiated.
3. Water production will be managed to ensure maintenance or enhancement of riparian habitat.
4. Temporary activities within 1 mile of nest sites will not occur during the breeding season of January 1 to August 31 unless the area has been surveyed according to protocol and determined to be unoccupied.
5. Temporary activities within ½ mile of winter roost areas (e.g., cottonwood galleries) will not occur during the winter roost season of November 1 to March 31 unless the area has been surveyed according to protocol and determined to be unoccupied.
6. No permanent infrastructure will be placed within 1 mile of nest sites.
7. No permanent infrastructure will be placed within ½ mile of winter roost areas.
8. Remove big game carrion to 100 feet from lease roadways occurring within bald eagle foraging range.
9. Avoid loss of or disturbance to large cottonwood gallery riparian habitats.
10. Where technically and economically feasible, use directional drilling or multiple wells from the same pad to reduce surface disturbance and eliminate drilling in suitable habitat. Use directional drilling to avoid direct impacts on large cottonwood gallery riparian habitats. Ensure that such directional drilling does not intercept or degrade alluvial aquifers.
11. All areas of surface disturbance within riparian areas and/or adjacent uplands should be revegetated with native species.

Additional measures may also be employed to avoid or minimize effects on the species between the lease sale stage and lease development stage. These additional measures will be developed and implemented in consultation with the USFWS to ensure continued compliance with the ESA.

## Lease Notice—Mexican Spotted Owl

The lessee/operator is given notice that the lands in this lease contain suitable habitat for MSO, a federally listed species. **Insert the following if the lease contains Designated Critical Habitat:** *[The Lessee/Operator is given notice that the lands in this lease contain Designated Critical Habitat for the Mexican spotted owl, a federally listed species. Critical habitat was designated for the Mexican spotted owl on August 31, 2004 (69 FR 53181-53298).]* Avoidance or use restrictions may be placed on portions of the lease. Application of appropriate measures will depend on whether the action is temporary or permanent and whether it occurs within or outside the owl nesting season. A *temporary* action is completed prior to the following breeding season, leaving no permanent structures and resulting in no permanent habitat loss. A *permanent* action continues for more than one breeding season and/or causes a loss of owl habitat or displaces owls through disturbances (i.e., creation of a permanent structure). The following avoidance and minimization measures have been designed to ensure activities carried out on the lease are in compliance with the ESA. Integration of and adherence to these measures will facilitate review and analysis of any submitted permits under the authority of this lease. Adhering to these measures could reduce the scope of Section 7 consultation at the permit stage.

Current avoidance and minimization measures include the following:

1. Surveys will be required prior to operations unless species occupancy and distribution information is complete and available. All surveys must be conducted by qualified individuals.
2. Assess habitat suitability for nesting and foraging using accepted habitat models in conjunction with field reviews. Apply the conservation measures below if project activities occur within ½ mile of suitable owl habitat. Determine potential effects of actions on owls and their habitat:
  - a. Document type of activity, acreage and location of direct habitat impacts, and type and extent of indirect impacts relative to location of suitable owl habitat.
  - b. Document if action is temporary or permanent.
3. Lease activities will require monitoring throughout the duration of the project. To ensure desired results are being achieved, minimization measures will be evaluated and, if necessary, Section 7 consultation reinitiated.
4. Water production will be managed to ensure riparian habitat is maintained or enhanced.
5. Where technically and economically feasible, use directional drilling or multiple wells from the same pad to reduce surface disturbance and eliminate drilling in canyon habitat suitable for MSO nesting.
6. For all temporary actions that may impact owls or suitable habitat:
  - a. If the action occurs entirely outside the owl breeding season (March 1 to August 31) and leaves no permanent structure or permanent habitat disturbance, action can proceed without an occupancy survey.
  - b. If action will occur during a breeding season, survey for owls prior to commencing activity. If owls are found, activity must be delayed until outside of the breeding season.
  - c. Rehabilitate access routes created by the project through such means as raking out scars, revegetation, and gating access points.
7. For all permanent actions that may impact owls or suitable habitat:

- a. Survey two consecutive years for owls according to accepted protocol prior to commencing activities.
- b. If owls are found, no actions will occur within ½ mile of identified nest site. If nest site is unknown, no activity will occur within the designated PAC.
- c. Avoid drilling and permanent structures within ½ mile of suitable habitat unless surveyed and not occupied.
- d. Reduce noise emissions (e.g., use hospital-grade mufflers) to 45 dBA at ½ mile from suitable habitat, including canyon rims. Placement of permanent noise-generating facilities should be determined by a noise analysis to ensure noise does not encroach upon a ½-mile buffer for suitable habitat, including canyon rims.
- e. Limit disturbances to and within suitable habitat by staying on approved routes.
- f. Limit new access routes created by the project.

Additional measures to avoid or minimize effects on the species may be developed and implemented in consultation with the USFWS between the lease sale stage and lease development stage to ensure continued compliance with the ESA.

### **Lease Notice—California Condor**

The Lessee/Operator is given notice that the lands located in this parcel contain potential habitat for the California Condor, a federally listed species. Avoidance or use restrictions may be placed on portions of the lease if the area is known or suspected to be used by condors. Application of appropriate measures will depend on whether the action is temporary or permanent, and whether it occurs within or outside potential habitat. A temporary action is completed prior to the following important season of use, leaving no permanent structures and resulting in no permanent habitat loss. This would include consideration for habitat functionality. A permanent action continues for more than one season of habitat use, and/or causes a loss of condor habitat function or displaces condors through continued disturbance (i.e. creation of a permanent structure requiring repetitious maintenance, or emits disruptive levels of noise).

The following avoidance and minimization measures have been designed to ensure activities carried out on the lease are in compliance with the Endangered Species Act. Integration of, and adherence to these measures will facilitate review and analysis of any submitted permits under the authority of this lease. Following these measures could reduce the scope of Endangered Species Act, Section 7 consultation at the permit stage.

Current avoidance and minimization measures include the following:

1. Surveys will be required prior to operations unless species occupancy and distribution information is complete and available. All Surveys must be conducted by qualified individual(s) approved by the BLM, and must be conducted according to approved protocol.
2. If surveys result in positive identification of condor use, all lease activities will require monitoring throughout the duration of the project to ensure desired results of applied mitigation and protection. Minimization measures will be evaluated during development and, if necessary, Section 7 consultation may be reinitiated.

3. Temporary activities within 1.0 mile of nest sites will not occur during the breeding season.
4. Temporary activities within 0.5 miles of established roosting sites or areas will not occur during the season of use, August 1 to November 31, unless the area has been surveyed according to protocol and determined to be unoccupied.
5. No permanent infrastructure will be placed within 1.0 mile of nest sites.
6. No permanent infrastructure will be placed within 0.5 miles of established roosting sites or areas.
7. Remove big game carrion to 100 feet from on lease roadways occurring within foraging range.
8. Where technically and economically feasible, use directional drilling or multiple wells from the same pad to reduce surface disturbance and eliminate drilling in suitable habitat Utilize directional drilling to avoid direct impacts to large cottonwood gallery riparian habitats. Ensure that such directional drilling does not intercept or degrade alluvial aquifers.
9. Reinitiation of Section 7 consultation with the Service will be sought immediately if mortality or disturbance to California condors is anticipated as a result of project activities. Additional site-specific measures may also be employed to avoid or minimize effects to the species. These additional measures will be developed and implemented in consultation with the U.S. Fish and Wildlife Service to ensure continued compliance with the ESA.

Additional measures may also be employed to avoid or minimize effects to the species between the lease sale and lease development stages. These additional measures will be developed and implemented in consultation with the U.S. Fish and Wildlife Service to ensure continued compliance with the Endangered Species Act.

### **Lease Notice—Utah Prairie Dog**

The lessee/operator is given notice that lands in this lease may contain historic and/or occupied Utah prairie dog habitat, a threatened species under the ESA. Avoidance or use restrictions may be placed on portions of the lease. Application of appropriate measures will depend on whether the action is temporary or permanent and whether it occurs when prairie dogs are active or hibernating. A *temporary* action is completed prior to the following active season, leaving no permanent structures and resulting in no permanent habitat loss. A *permanent* action continues for more than one activity/hibernation season and/or causes a loss of Utah prairie dog habitat or displaces prairie dogs through disturbances (i.e., creation of a permanent structure). The following avoidance and minimization measures have been designed to ensure activities carried out on the lease are in compliance with the ESA. Integration of and adherence to these measures will facilitate review and analysis of any submitted permits under the authority of this lease. Adhering to these measures could reduce the scope of Section 7 consultation at the permit stage.

Current avoidance and minimization measures include the following:

1. Surveys will be required prior to operations unless species occupancy and distribution information is complete and available. All surveys must be conducted by qualified individuals.

2. Lease activities will require monitoring throughout the duration of the project. To ensure desired results are being achieved, minimization measures will be evaluated and, if necessary, Section 7 consultation reinitiated.
3. Where technically and economically feasible, use directional drilling or multiple wells from the same pad to reduce surface disturbance and eliminate drilling in prairie dog habitat.
4. Surface occupancy or other surface disturbing activity will be avoided within ½ mile of active prairie dog colonies.
5. Permanent surface disturbance or facilities will be avoided within ½ mile of potentially suitable, unoccupied prairie dog habitat, identified and mapped by UDWR since 1976.
6. The lessee/operator should consider if fencing infrastructure on the well pad (e.g., drill pads, tank batteries, and compressors) would be needed to protect equipment from burrowing activities. The operator should also consider if future surface disturbing activities would be required at the site.
7. Within occupied habitat, set a 25-mph speed limit on operator-created and -maintained roads.
8. Limit disturbances to and within suitable habitat by staying on designated routes.
9. Limit new access routes created by the project.

Additional measures to avoid or minimize effects on the species may be developed and implemented in consultation with the USFWS between the lease sale stage and lease development stage to ensure continued compliance with the ESA.

### **Lease Notice—Southwestern Willow Flycatcher**

The lessee/operator is given notice that the lands in this parcel contain riparian habitat that falls within the range for Southwestern willow flycatcher, a federally listed species. Avoidance or use restrictions may be placed on portions of the lease. Application of appropriate measures will depend on whether the action is temporary or permanent, and whether it occurs within or outside the nesting season. A temporary action is completed prior to the following breeding season, leaving no permanent structures and resulting in no permanent habitat loss. A permanent action continues for more than one breeding season and/or causes a loss of habitat or displaces flycatchers through disturbances (e.g., creation of a permanent structure). The following avoidance and minimization measures have been designed to ensure activities carried out on the lease are in compliance with the ESA. Integration of and adherence to these measures will facilitate review and analysis of any submitted permits under the authority of this lease. Adhering to these measures could reduce the scope of Section 7 consultation at the permit stage.

Current avoidance and minimization measures include the following:

1. Surveys will be required prior to operations unless species occupancy and distribution information is complete and available. All surveys must be conducted by qualified individuals and according to protocol.
2. Lease activities will require monitoring throughout the duration of the project. To ensure desired results are being achieved, minimization measures will be evaluated and, if necessary, Section 7 consultation reinitiated.

3. Water production will be managed to ensure maintenance or enhancement of riparian habitat.
4. Where technically and economically feasible, use directional drilling or multiple wells from the same pad to reduce surface disturbance and eliminate drilling in suitable riparian habitat. Ensure that such directional drilling does not intercept or degrade alluvial aquifers.
5. Drilling activities will maintain a 300-foot buffer from suitable riparian habitat year long.
6. Drilling activities within ¼ mile of occupied breeding habitat will not occur during the breeding season of May 1 to August 15.
7. Ensure that water extraction or disposal practices do not result in change of hydrologic regime that would result in loss or degradation of riparian habitat.
8. Revegetate with native species all areas of surface disturbance within riparian areas and/or adjacent uplands.

Additional measures to avoid or minimize effects on the species may be developed and implemented in consultation with the USFWS between the lease sale stage and lease development stage to ensure continued compliance with the ESA.

### **Lease Notice—Listed Plant Species**

The lessee/operator is given notice that the lands in this parcel contain suitable habitat for federally listed plant species under the ESA. The following avoidance and minimization measures have been developed to facilitate review and analysis of any submitted permits under the authority of this lease:

1. Site inventories:
  - a. Must be conducted to determine habitat suitability.
  - b. Are required in known or potential habitat for all areas proposed for surface disturbance prior to initiation of project activities, at a time when the plant can be detected, and during appropriate flowering periods.
  - c. Documentation should include but not be limited to individual plant locations and suitable habitat distributions.
  - d. All surveys must be conducted by qualified individuals.
2. Lease activities will require monitoring throughout the duration of the project. To ensure desired results are being achieved, minimization measures will be evaluated and, if necessary, Section 7 consultation reinitiated.
3. Project activities must be designed to avoid direct disturbance to populations and to individual plants:
  - a. Designs will avoid concentrating water flows or sediments into plant occupied habitat.
  - b. Construction will occur down-slope of plants and populations where feasible; if well pads and roads must be sited up-slope, buffers of 100 feet minimum between surface disturbances and plants and populations will be incorporated.
  - c. Where populations occur within 200 feet of well pads, establish a buffer or fence the individuals or groups of individuals during and post-construction.
  - d. Areas for avoidance will be visually identifiable in the field (e.g., flagging, temporary fencing, or rebar).

- e. For surface pipelines, use a 10-foot buffer from any plant locations:
  - i. If on a slope, use stabilizing construction techniques to ensure the pipelines do not move toward the population.
4. For riparian/wetland-associated species (e.g., Ute ladies-tresses), avoid loss or disturbance of riparian habitats:
  - a. Ensure that water extraction or disposal practices do not result in change of hydrologic regime.
5. Limit disturbances to and within suitable habitat by staying on designated routes.
6. Limit new access routes created by the project.
7. Place signing to limit all-terrain vehicle (ATV) travel in sensitive areas.
8. Implement dust abatement practices near occupied plant habitat.
9. All disturbed areas will be revegetated with native species composed of species indigenous to the area.
10. Post-construction monitoring for invasive species will be required.
11. Where technically and economically feasible, use directional drilling or multiple wells from the same pad to reduce surface disturbance and eliminate drilling in plant habitat. Ensure that such directional drilling does not intercept or degrade alluvial aquifers.
12. Lease activities will require monitoring throughout the duration of the project. To ensure desired results are being achieved, minimization measures will be evaluated and, if necessary, Section 7 consultation reinitiated.

Additional measures to avoid or minimize effects on the species may be developed and implemented in consultation with the USFWS between the lease sale stage and lease development stage to ensure continued compliance with the ESA.

### **Lease Notice—Welsh’s Milkweed**

In order to minimize effects to the federally threatened Welsh’s milkweed, the Bureau of Land Management (BLM), in coordination with the U.S. Fish and Wildlife Service (Service), has developed the following avoidance and minimization measures. Implementation of these measures will help ensure the activities carried out during oil and gas development (including but not limited to drilling, production, and maintenance operations) are in compliance with the Endangered Species Act (ESA). For the purposes of this document, the follow terms are so defined:

- Potential habitat is defined as areas which satisfy the broad criteria of the species habitat description; usually determined by preliminary, in-house assessment.
- Suitable habitat is defined as areas which contain or exhibit the specific components or constituents necessary for plant persistence; determined by field inspection and/or surveys; may or may not contain clay reed-mustard; habitat descriptions can be found in Federal Register Notice and species recovery plan links at <http://www.fws.gov/endangered/wildlife.html>.
- Occupied habitat is defined as areas currently or historically known to support clay reed-mustard; synonymous with “known habitat.”

The following avoidance and minimization measures should be included in the Plan of Development:

1. Pre-project habitat assessments will be completed across 100% of the project disturbance area within potential habitat prior to any ground disturbing activities to determine if suitable Welsh's milkweed habitat is present.
2. Within suitable habitat, site inventories will be conducted to determine occupancy. Where standard surveys are technically infeasible and otherwise hazardous due to topography, slope, etc., suitable habitat will be assessed and mapped for avoidance (hereafter, "avoidance areas"); in such cases, in general, 300' buffers will be maintained between surface disturbance and avoidance areas. However, site specific distances will need to be approved by FWS and BLM when disturbance will occur upslope of habitat. Inventories:
  - a. Must be conducted by qualified individual(s) approved by BLM using accepted survey protocols,
  - b. Will be conducted in suitable and occupied habitat for all areas proposed for surface disturbance prior to initiation of project activities and within the same growing season, at a time when the plant can be detected and during appropriate flowering periods. Inventories should be conducted between June 1st and August 15th, however, surveyors should verify that the plant is flowering by contacting a BLM or FWS botanist or demonstrating that the nearest known population is in flower ),
  - c. Will occur within 300' from the centerline of the proposed right-of-way for surface pipelines or roads; and within 300' from the perimeter of disturbance for the proposed well pad including the well pad,
  - d. Will include, but not be limited to, plant species lists and habitat characteristics, and is there more?
3. Design project infrastructure to minimize impacts within suitable habitat:
  - a. Where standard surveys are technically infeasible, infrastructure and activities will avoid all suitable habitat (avoidance areas) and incorporate 300' buffers, in general; however, site specific distances will need to be approved by FWS and BLM when disturbance will occur upslope of habitat,
  - b. Reduce well pad size to the minimum needed, without compromising safety,
  - c. Where technically and economically feasible, use directional drilling or multiple wells from the same pad,
  - d. Limit new access routes created by the project,
  - e. Roads and utilities should share common right-of-ways where possible,
  - f. Reduce the width of right-of-ways and minimize the depth of excavation needed for the road bed; where feasible, use the natural ground surface for the road within habitat,
  - g. Place signing to limit off-road travel in sensitive areas, and
  - h. Stay on designated routes and other cleared/approved areas.
  - i. All disturbed areas will be revegetated with native species comprised of species indigenous to the area and non-native species that are not likely to invade other areas.
4. Within occupied habitat, project infrastructure will be designed to avoid direct disturbance and minimize indirect impacts to populations and to individual plants:
  - a. Follow the above recommendations (#3) for project design within suitable habitats,

- b. To avoid water flow and/or sedimentation into occupied habitat and avoidance areas, silt fences, hay bales, and similar structures or practices will be incorporated into the project design; appropriate placement of fill is encouraged,
  - c. Construction of roads will occur such that the edge of the right of way is at least 300' from any plant and 300' from avoidance areas,
  - d. Roads will be graveled within occupied habitat; the operator is encouraged to apply water for dust abatement to such areas from June 1st to August 15th (flowering period); dust abatement applications will be comprised of water only,
  - e. The edge of the well pad should be located at least 300' away from plants and avoidance areas, in general; however, site specific distances will need to be approved by FWS and BLM when disturbance will occur upslope of habitat,
  - f. Surface pipelines will be laid such that a 300' buffer exists between the edge of the right of way and plants and 300' between the edge of right of way and avoidance areas; use stabilizing and anchoring techniques when the pipeline crosses suitable habitat to ensure pipelines don't move towards the population; site specific distances will need to be approved by FWS and BLM when disturbance will occur upslope of habitat,
  - g. Construction activities will not occur from June 1st through August 15th within occupied habitat,
  - h. Before and during construction, areas for avoidance should be visually identifiable in the field, e.g., flagging, temporary fencing, rebar, etc.,
  - i. Place produced oil, water, or condensate tanks in centralized locations, away from occupied habitat, and
  - j. Minimize the disturbed area of producing well locations through interim and final reclamation. Reclaim well pads following drilling to the smallest area possible.
5. Occupied Welsh's milkweed habitats within 300' of the edge of the surface pipelines' right-of-ways, 300' of the edge of the roads' right-of-ways, and 300' from the edge of the well pad shall be monitored for a period of three years after ground disturbing activities. Monitoring will include annual plant surveys to determine plant and habitat impacts relative to project facilities. Annual reports shall be provided to the BLM and the Service. To ensure desired results are being achieved, minimization measures will be evaluated and may be changed after a thorough review of the monitoring results and annual reports during annual meetings between the BLM and the Service.
  6. Reinitiation of section 7 consultation with the Service will be sought immediately if any loss of plants or occupied habitat for the Welsh's milkweed is anticipated as a result of project activities. Additional site-specific measures may also be employed to avoid or minimize effects to the species. These additional measures will be developed and implemented in consultation with the U.S. Fish and Wildlife Service to ensure continued compliance with the ESA.

### **Siler Pincushion Cactus**

In order to minimize effects to the federally threatened Siler pincushion cactus, the Bureau of Land Management (BLM), in coordination with the U.S. Fish and Wildlife Service (Service), has developed the following avoidance and minimization measures. Implementation of these measures will help ensure the activities carried out during oil and gas development (including but not limited to drilling, production, and maintenance operations) are in compliance with the

Endangered Species Act (ESA). For the purposes of this document, the following terms are so defined:

- Potential habitat is defined as areas which satisfy the broad criteria of the species habitat description; usually determined by preliminary, in-house assessment.
- Suitable habitat is defined as areas which contain or exhibit the specific components or constituents necessary for plant persistence; determined by field inspection and/or surveys; may or may not contain clay reed-mustard; habitat descriptions can be found in Federal Register Notice and species recovery plan links at <http://www.fws.gov/endangered/wildlife.html>.
- Occupied habitat is defined as areas currently or historically known to support the Siler pincushion cactus; synonymous with “known habitat.”

The following avoidance and minimization measures should be included in the Plan of Development:

1. Pre-project habitat assessments will be completed across 100% of the project disturbance area within potential habitat prior to any ground disturbing activities to determine if suitable Siler pincushion cactus habitat is present.
2. Within suitable habitat, site inventories will be conducted to determine occupancy. Where standard surveys are technically infeasible and otherwise hazardous due to topography, slope, etc., suitable habitat will be assessed and mapped for avoidance (hereafter, “avoidance areas”); in such cases, in general, 300’ buffers will be maintained between surface disturbance and avoidance areas. However, site specific distances will need to be approved by FWS and BLM when disturbance will occur upslope of habitat.  
Inventories:
  - a. Must be conducted by qualified individual(s) approved by BLM using accepted survey protocols,
    - i. Will be conducted in suitable and occupied habitat for all areas proposed for surface disturbance prior to initiation of project activities and within the same growing season, at a time when the plant can be detected and during appropriate flowering periods. Inventories should be conducted between March 1st to May 15th, however, surveyors should verify that the plant is flowering by contacting a BLM or FWS botanist or demonstrating that the nearest known population is in flower,
  - b. Will occur within 300’ from the centerline of the proposed right-of-way for surface pipelines or roads; and within 300’ from the perimeter of disturbance for the proposed well pad including the well pad,
  - c. Will include, but not be limited to, plant species lists and habitat characteristics, and
  - d. Will be valid until April 1st the following year.
3. Design project infrastructure to minimize impacts within suitable habitat:
  - a. Where standard surveys are technically infeasible, infrastructure and activities will avoid all suitable habitat (avoidance areas) and incorporate 300’ buffers, in general; however, site specific distances will need to be approved by FWS and BLM when disturbance will occur upslope of habitat,
  - b. Reduce well pad size to the minimum needed, without compromising safety,

- c. Where technically and economically feasible, use directional drilling or multiple wells from the same pad,
  - d. Limit new access routes created by the project,
  - e. Roads and utilities should share common right-of-ways where possible,
  - f. Reduce the width of right-of-ways and minimize the depth of excavation needed for the road bed; where feasible, use the natural ground surface for the road within habitat,
  - g. Place signing to limit off-road travel in sensitive areas, and
  - h. Stay on designated routes and other cleared/approved areas.
  - i. All disturbed areas will be revegetated with native species comprised of species indigenous to the area and non-native species that are not likely to invade other areas.
4. Within occupied habitat, project infrastructure will be designed to avoid direct disturbance and minimize indirect impacts to populations and to individual plants:
- a. Follow the above recommendations (#3) for project design within suitable habitats,
  - b. To avoid water flow and/or sedimentation into occupied habitat and avoidance areas, silt fences, hay bales, and similar structures or practices will be incorporated into the project design; appropriate placement of fill is encouraged,
  - c. Construction of roads will occur such that the edge of the right of way is at least 300' from any plant and 300' from avoidance areas,
  - d. Roads will be graveled within occupied habitat; the operator is encouraged to apply water for dust abatement to such areas from April 1st to June 15th (flowering period); dust abatement applications will be comprised of water only,
  - e. The edge of the well pad should be located at least 300' away from plants and avoidance areas, in general; however, site specific distances will need to be approved by FWS and BLM when disturbance will occur upslope of habitat,
  - f. Surface pipelines will be laid such that a 300' buffer exists between the edge of the right of way and plants and 300' between the edge of right of way and avoidance areas; use stabilizing and anchoring techniques when the pipeline crosses suitable habitat to ensure pipelines don't move towards the population; site specific distances will need to be approved by FWS and BLM when disturbance will occur upslope of habitat,
  - g. Construction activities will not occur from April 1st through June 15th within occupied habitat,
  - h. Before and during construction, areas for avoidance should be visually identifiable in the field, e.g., flagging, temporary fencing, rebar, etc.,
  - i. Place produced oil, water, or condensate tanks in centralized locations, away from occupied habitat, and
  - j. Minimize the disturbed area of producing well locations through interim and final reclamation. Reclaim well pads following drilling to the smallest area possible.
5. Occupied Siler pincushion cactus habitats within 300' of the edge of the surface pipelines' right-of-ways, 300' of the edge of the roads' right-of-ways, and 300' from the edge of the well pad shall be monitored for a period of three years after ground disturbing activities. Monitoring will include annual plant surveys to determine plant and habitat impacts relative to project facilities. Annual reports shall be provided to the BLM and the Service. To ensure desired results are being achieved, minimization

measures will be evaluated and may be changed after a thorough review of the monitoring results and annual reports during annual meetings between the BLM and the Service.

6. Reinitiation of section 7 consultation with the Service will be sought immediately if any loss of plants or occupied habitat for the Siler pincushion cactus is anticipated as a result of project activities. Additional site-specific measures may also be employed to avoid or minimize effects to the species. These additional measures will be developed and implemented in consultation.

## **ENDANGERED SPECIES RECOVERY PLANS AND CONSERVATION AGREEMENTS**

In addition to the conservation measures and lease notices discussed above, documents such as species-specific recovery plans and conservation strategies, agreements, and plans contain management plans and strategies to protect special status species. These documents are developed using the most current science, but as monitoring and current scientific findings provide further information, they are subject to revision, amendment, or update. As such, the list of documents applicable for the decision area could be increased or decreased based on species listing, condition, distribution, and so forth. Documents for species within the decision area include, but are not limited to, the following:

- Mexican Spotted Owl Recovery Plan, 1995
- Northern States Bald Eagle Recovery Plan, 1983
- American Peregrine Falcon Recovery Plan, 1984
- Utah Prairie Dog Recovery Plan, 1991
- Utah Prairie Dog Interim Conservation Strategy, 1997
- Welsh's Milkweed Recovery Plan, 1992
- Siler Pincushion Cactus Recovery Plan, 1986
- Autumn Buttercup Recovery Plan, 1991
- Northern Goshawk Conservation Agreement, 1998
- Conservation Agreement and Strategy for the Coral Pink Sand Dunes Tiger Beetle, 1997
- Range-Wide Conservation Agreement for Roundtail Chub, Bluehead Sucker, and Flannelmouth Sucker, 2004
- Recovery Plan for the California Condor, 1996
- Final Recovery Plan for the Southwestern Willow Flycatcher, 2002
- Interim Conservation Plan for Ambersnails of the Southwestern United States (DRAFT), Year Unknown.

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## APPENDIX 10—STATE OF UTAH LETTER ADDRESSING AIR QUALITY



State of Utah

JON M. HUNTSMAN, JR.  
Governor

GARY R. HERBERT  
Lieutenant Governor

June 6, 2008

Selma Sierra  
State Director  
BLM Utah State Office  
P.O. Box 45155  
Salt Lake City, Utah 84145-0155

Dear Director Sierra:

This letter addresses air quality mitigation strategies for the six proposed Resource Management Plans being updated within the State of Utah. The state appreciates BLM's interest in this important issue.

It is the policy of the State of Utah to protect public health and the environment from the harmful effects of air pollution, to ensure that the air in Utah meets standards established under federal and state law, and to maintain an environment that is conducive to continued economic vitality and growth.

The Department of Interior monitors ozone at National Parks in the intermountain west, including: Mesa Verde National Park in Colorado, Grand Canyon National Park in Arizona, Great Basin National Park in Nevada, and Canyonlands National Park in Utah. These sites reflect conditions in areas that have not been subject to intensive development and are therefore generally indicative of background conditions. Monitoring data at these locations demonstrates a gradual upward trend in ozone levels, raising questions about ozone levels region-wide. The state believes additional information is needed regarding current conditions and the potential impacts from increasing development activity, including oil and gas activity. This information should inform future BLM decision making, but managers should not defer management actions in anticipation of better information.

Fortunately, ozone related impacts can be reduced if certain mitigation measures are required on new oil and gas related emission sources. In fact, several neighboring states currently encourage application of just such measures. BLM should include interim nitrogen oxide control measures provided by the state as a required condition of lease approval. These control measures are consistent with control measures suggested by neighboring states and jurisdictions. The state recognizes that performance standards will continue to evolve and supports technological flexibility, provided control measures are at least as effective as those in place elsewhere within the region at the time of site-specific authorization. Performance standards representing the current regional standard can be found in the *Four Corners Air*

*Quality Task Force Report of Mitigation Options, DRAFT: Version 7, June 22, 2007. These standards are 2 g/bhp-hr for engines less than 300 HP and 1 g/bhp-hr for engines over 300 HP.*

The State of Utah will continue to work with the BLM and others through efforts such as the Four Corners Task Force to address these issues. The state appreciates your cooperation in working to protect air quality related values. If you have any questions about our position, please contact me at (801) 537-9802.

Sincerely,

John Harja  
Director  
Public Lands Policy Coordination  
5110 State Office Building  
Salt Lake City, Utah 84114-1107  
(801) 537-9802

Cheryl Heying  
Director  
Division of Air Quality  
150 North, 1950 West  
Salt Lake City, Utah 84114  
(801) 536-4000

# APPENDIX 11—WILD AND SCENIC RIVERS STUDY PROCESS

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## I. INTRODUCTION

The Wild and Scenic Rivers Act (October 2, 1968, Public Law 90-542) establishes the National Wild and Scenic Rivers System (NWSRS), which is intended to preserve free-flowing rivers with outstandingly remarkable values (ORV) in their natural condition for the benefit of present and future generations, balancing the nation’s water resource development policies with river conservation and recreation goals.

The Wild and Scenic Rivers Act states, “In all planning for the use and development of water and related land resources, consideration shall be given by all federal agencies involved to potential national wild, scenic and recreational river areas...” [Section 5(d) (1)]. Federal agencies consider potential rivers by evaluating a river’s eligibility, tentative classification, and suitability for designation under the Wild and Scenic Rivers Act. This study process is part of the resource management planning effort for the Kanab Field Office.

Eligibility and tentative classification are determined by an inventory of existing conditions. Eligibility involves an evaluation of whether a river or river segment is free-flowing and possesses one or more ORVs. If found eligible, a river is analyzed as to its current level of development (e.g., water resources projects, shoreline development, and accessibility) and segmented accordingly. Each river segment is given one of three tentative classifications—“wild,” “scenic,” or “recreational”—based on the degree of development. The final procedural step, suitability, provides the basis for determining whether to recommend a river as part of the National Wild and Scenic Rivers System (NWSRS).

On December 13, 1994, an interagency agreement was signed by the Bureau of Land Management (BLM) (Utah State Office), the U.S. Department of Agriculture (USDA) Forest Service (Intermountain Region), and the National Park Service (Rocky Mountain Region). The agreement calls for the three agencies to “work cooperatively to define common criteria and processes for use in determining the eligibility and suitability of Utah rivers for potential inclusion by Congress in the [national system of Wild and Scenic Rivers].” The product of this agreement is the *Wild and Scenic River Review in the State of Utah: Process and Criteria for Interagency Use*, also known as the Utah Wild and Scenic River “Blue Book,” published in June 1996. This publication supplements the Wild and Scenic Rivers Act by providing clear, specific criteria for identifying eligible rivers, including identification and evaluation of ORVs.

Guidance used for this study is also contained in the Wild and Scenic Rivers—Policy and Program Direction for Identification, Evaluation, and Management, Bureau of Land Management Manual—8351. In June 2004, the BLM issued IM-2004-196, which clarified policy in BLM Manual—8351 with respect to eligibility criteria and protective management. In addition, various technical papers published by the Interagency Wild and Scenic Rivers Coordination Council related to the evaluation of rivers were used. These publications may be found at [www.nps.gov/rivers/publications.html](http://www.nps.gov/rivers/publications.html).

## II. ELIGIBILITY AND TENTATIVE CLASSIFICATION

### Eligibility Determination Considerations

For a river to be eligible for inclusion in the national system of rivers, the Wild and Scenic Rivers Act specifies that certain criteria (discussed below) must be met. These criteria apply not only to each potentially eligible river but also to their immediate environment, which is defined as a river corridor extending, on average, ¼ mile from both sides of the high water mark. For purposes of the eligibility inventory, attention was not given to land ownership other than to ensure that at least some portion of a river segment crosses federal lands administered by the Kanab Field Office. The status of land ownership, however, is evaluated as a consideration in the suitability step of the study process, and is presented in detail in Section III of this appendix.

### Free-Flowing Character

To be considered a free-flowing river, it must be a flowing body of water, or estuary, or section, portion, or tributary thereof, including rivers, streams, creeks, runs, kills, rills, and small lakes [Section 16 (a)]. A river can be any size or length, and does not have to be floatable or boatable. For purposes of eligibility determination, a river's flow is sufficient as long as it sustains or complements the ORV for which the river is found to be eligible. The body of water must be existing or flowing in a natural condition without major modification of the waterway, such as channelization, impoundment, diversion, straightening, rip-rapping, or other modification. However, some minor modifications can be allowed, such as low dams, diversion works, and minor structures [Section 16 (b)]. The river can lie between impoundments or major dams.

### Outstandingly Remarkable Values

The Wild and Scenic Rivers Act specifies that rivers “with their immediate environment, must possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar value” [Section 1 (b)].

The “Blue Book” further describes values and characteristics of each that are used to determine which values are outstandingly remarkable and at least regionally significant. The following summarizes the characteristics of each value that would render it rare, unique, or exemplary:

- **Scenic:** Diversity of view, special features, seasonal variations, and cultural features
- **Recreational:** Diversity of use, experience quality, length of season, access, level of use, attraction, sites and facilities, and associated opportunities
- **Geologic:** Feature abundance, diversity of features, and educational /scientific importance
- **Fish:** Habitat quality, diversity of species, values of species, abundance of fish, natural reproduction, size and vigor of fish, quality of experience, cultural/historic importance, recreational importance, and access
- **Wildlife:** Habitat quality, diversity of species, abundance of species, natural reproduction, size and vigor of fish, quality of experience, cultural/historic importance, recreational importance, and access
- **Historic:** Significance, site integrity, education/interpretation, and listing in or eligibility for listing in the National Register of Historic Places (NRHP)
- **Cultural:** Significance, current uses, number of cultures, site integrity, education/interpretation, and listing in or eligibility for listing in NRHP

- **Ecologic:** Species diversity, ecological function, rare communities, and educational/scientific features.

Because these values must be at least regionally significant to be considered outstandingly remarkable, a region of comparison is necessary to guide the evaluation of a value's significance. On May 8, 2002, an interagency team consisting of representatives of various National Forests, National Parks, and BLM offices within Utah concluded that using applicable ecological sections, or combinations of these sections, would be the most appropriate way to delineate regions of comparison. Ecological sections are basically subunits of physiographic provinces such as the Colorado Plateau.

Ecological sections provide clear parameters of major ecological systems as defined by geology, topography, climate, and so on, and are typically the most distinct, visible features of the landscape. They offer an excellent context with relative consistency of scenic, wildlife, and other values for comparison, and are large enough to encompass areas with similar values without forcing comparison of disparate values.

Team members relied on professional expertise, personal knowledge of the river segments, and field visits to determine if values were outstandingly remarkable. The interdisciplinary team generally defined the region of comparison as the Colorado Plateau. The region of comparison is intended to guide the evaluation, but it can vary for different resource considerations. The interdisciplinary team included an archeologist, hydrologist, geologist, rangeland specialists, wildlife biologist, recreation planner, realty specialist, landscape architect, land use planner, and geographic information system (GIS) specialist. If a segment was free-flowing and had at least one ORV, it was considered eligible. The team determined that 15 river segments were preliminarily eligible for congressional designation as Wild and Scenic Rivers.

### **Tentative Classification**

Eligible rivers are given a tentative classification. The Wild and Scenic Rivers Act provides for three possible classifications: "wild," "scenic," or "recreational." These classifications, when applied to eligible rivers, are based on the type and degree of human development associated with the river and adjacent lands present at the time of inventory. They also prescribe what management activities would be allowed to occur along a river, as long as no ORV is compromised. The tentative classifications are based on the following:

- **Wild:** Rivers classified as "wild", which is the most restrictive Wild and Scenic River classification, are rivers that are free of impoundments and those that are generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted.
- **Scenic:** Rivers classified as "scenic" are rivers that are generally free of impoundments, with shorelines or watersheds that are still largely primitive and shorelines that are largely undeveloped, but accessible in places by roads.
- **Recreational:** Rivers classified as "recreational" classification, which is the least restrictive Wild and Scenic River classification, are rivers that are readily accessible by road or railroad, that may have some development along their shorelines, and that may have substantial evidence of human activity.

The BLM may consider alternative tentative classifications at the time of evaluating suitability, as per BLM Manual 8351.33C, to resolve potential conflicts with other management objectives (whether BLM's or those of another official entity), provide continuity of management prescriptions, or on the basis of other management considerations within the river area. Final classification of a river segment is determined if and when a river is designated for entry into the national system.

### **Eligibility Determinations Process**

The eligibility of the Paria River segment located within the Paria Canyon–Vermilion Cliffs Wilderness was determined in a previous study. The segment of the Paria River in Utah was found to be eligible in the Final Arizona Statewide Wild and Scenic Rivers Legislative Environmental Impact Statement, December 1994.

### **Coordination**

In November 1997, a Memorandum of Understanding (MOU) was signed between the State of Utah and the BLM by former governor, Mike Leavitt, and former BLM state director, William Lamb, to establish a cooperative effort for Wild and Scenic River study processes for BLM field offices in Utah. In addition, Kane County previously established a cooperative agreement with the BLM for land use planning in a MOU signed February 2004. Likewise, Garfield County agreed to cooperate in a similar MOU signed July 2004. These agreements enabled the BLM to expand the interdisciplinary team of specialists formed for this study process to include representatives from these governments.

### **Identification of Rivers for Review**

The role of federal land management agencies is to review rivers under their jurisdictions to determine their eligibility, tentative classification, and suitability for congressional designation. A river means a flowing body of water or estuary or a section, portion, or tributary thereof, including rivers, streams, creeks, runs, kills, rills, and small lakes. The evaluation process began with the solicitation of public nominations for eligible rivers. During that process, no nominations were received from the public. The interdisciplinary team then considered all drainages crossing public lands within the Kanab Field Office decision area, as depicted on BLM 1:100,000 scale topographic maps. These drainages were reviewed to determine if they were (1) free-flowing and (2) contained any potential ORVs as defined in the Wild and Scenic Rivers Act. In addition, the BLM used information from the Utah Rivers Council and the National Rivers Inventory. In all, 50 drainages were reviewed.

### **Rivers Studied—Not Considered Further**

The following rivers were considered potentially eligible in the initial review of the decision area. However, they were found to be ephemeral, not free-flowing, or void of any ORVs. As directed by IM-2004-196 (*Clarification of Policy in the BLM Manual Section 8351, Wild and Scenic Rivers, with Respect to Eligibility Criteria and Protective Management*), segments “should not be ephemeral (flow lasting only few days out of a year).”

- Johnson Wash—Ephemeral, not free-flowing.

- Fisher Canyon—Ephemeral, no ORVs.
- Robinson Creek—Ephemeral, no ORVs.
- Sink Valley Wash—Ephemeral, no ORVs.
- Trail Canyon—Ephemeral, no ORVs.
- Pugh Canyon—Ephemeral, no ORVs.
- Toms Canyon—Not free-flowing due to diversions.
- Maranger Canyon—Ephemeral, no ORVs.
- Willis Canyon (Complex)—Ephemeral, no ORVs.
- Oak Canyon—Ephemeral, no ORVs.
- Dairy Canyon—Ephemeral, no ORVs.
- Steep Trail Spring Canyon—No ORVs.
- Red Hollow—Not free-flowing, no ORVs.
- Dry Wash—Ephemeral, no ORVs.
- Lydia’s Canyon—Not free-flowing, no ORVs.
- Smith Creek—Not free-flowing, no ORVs.
- Limekiln Creek—No ORVs.
- Peterson Wash—Ephemeral, no ORVs.
- Sanford Creek—No ORVs.
- Butler Wash—Ephemeral, no ORVs.
- Bunting Canyon—Ephemeral, no ORVs.
- Panguitch Creek—Mostly private, only 660 feet on BLM lands.
- Escalante Creek—Only 2,300 feet on land outside the Grand Staircase–Escalante National Monument (GSENM), character not the same as what was found suitable in GSENM plan. Was found not eligible in GSENM planning process.
- Buckskin Gulch—Ephemeral.
- Wire Pass—Ephemeral.
- Varney Griffin—No ORVs.

**Potentially Eligible Rivers Considered**

From among all of the streams identified, focus was narrowed by the interdisciplinary team to those identified as potentially eligible. Following the review of 50 drainages, 34 river segments were identified as potentially eligible or requiring further review. Table A13-5 is a list of these segments and the evaluation of findings.

**Table A13-5. Summary of All Potentially Eligible River Segments Considered, and Identification of Outstandingly Remarkable Values**

Segment Description	County	Drainage Type <sup>i</sup>	Free-Flowing <sup>ii</sup>	Potential Outstandingly Remarkable Value(s)
North Fork Virgin River—Segment 48-49 Section 31-33 (northeast of Zion National Park [NP]).	Kane	Perennial	Yes	Scenic Geologic Wildlife Recreational
North Fork Virgin River—Segment 46-47 Section 34 up to private land boundary in northwest quarter of Section 24.	Kane	Perennial	Yes	Scenic Wildlife Recreational

Segment Description	County	Drainage Type <sup>i</sup>	Free-Flowing <sup>ii</sup>	Potential Outstandingly Remarkable Value(s)
<u>East Fork Virgin River</u> —Segment 36-41 private property to Zion NP boundary.	Kane	Perennial	Yes	Scenic Geologic Wildlife Fish Historic Ecologic Recreational Cultural
<u>Orderville Gulch (Esplin Gulch)</u> —Segment 44-45 Zion NP boundary to the falls; Esplin Gulch Segment 45-45A.	Kane	Perennial	Yes	Scenic Recreational Geologic Wildlife Ecologic
<u>Bob Creek (tributary of Orderville Gulch)</u> —Segment 42-43 from diversion to Bob Creek in Section 6.	Kane	Perennial	Yes	Scenic
<u>Meadow Creek / Mineral Gulch</u> —Segments 33-35 and 35-38 south of Highway 9 to confluence with Mineral Gulch, then to confluence with East Fork Virgin River.	Kane	Perennial	Yes	Scenic Recreational Geologic
<u>Deep Creek</u> —Segment 50-51 from Washington County line to BLM boundary in Section 30.	Kane	Perennial	Yes	Scenic
<u>Kanab Creek</u> —Segment 7-8 south of Alton at Alton Sink Valley Road to the falls.	Kane	Perennial	No	None
<u>Kanab Creek</u> —Segment 8-9 from falls to BLM boundary in northeast corner in Section 32.	Kane	Intermittent	Yes	Scenic Recreational Wildlife
<u>Kanab Creek</u> —Segment 9-10 from Point 9 to dam north of Kanab.	Kane	Perennial	Yes	Scenic Wildlife
<u>Cottonwood Creek</u> —Segment 28-29 beginning in Section 10 at BLM boundary, ending at confluence with Indian Canyon.	Kane	Perennial	Yes	Scenic Recreational Wildlife Cultural
<u>Cottonwood Creek</u> —Segment 31-32 beginning at confluence with Indian Canyon to BLM boundary in Section 3.	Kane	Perennial	No	None
<u>Indian Canyon</u> —Segment 26-27 from head of canyon to confluence with Cottonwood Creek.	Kane	Perennial	Yes	Scenic Recreational Geologic Ecologic

Segment Description	County	Drainage Type <sup>i</sup>	Free-Flowing <sup>ii</sup>	Potential Outstandingly Remarkable Value(s)
<u>South Fork Indian Canyon</u> —Segment 22-23 from head of South Fork Indian Canyon to BLM boundary in northeast corner of Section 20.	Kane	Perennial	Yes	Scenic Recreational Wildlife Cultural Ecologic
<u>North Branch of South Fork Indian Canyon</u> —Segment 23-24 from point where canyon deepens to BLM boundary in southeast corner of Section 17.	Kane	Perennial	Yes	Scenic Recreational Geologic Cultural Ecologic
<u>Water Canyon</u> —Segment 20-21 beginning at head of canyon to BLM boundary in Section 21.	Kane	Perennial	Yes	Scenic Recreational Geologic Ecologic
<u>Hell Dive Canyon</u> —Segment 30-31 from point where canyon deepens to confluence with Cottonwood Creek.	Kane	Perennial	Yes	Scenic Recreational Geologic Cultural Ecologic
<u>Thompson Creek</u> —Segment 5-6 beginning at BLM boundary just south of confluence with Birch Creek to BLM boundary at south end of Section 19.	Kane	Perennial	Yes	None
<u>Mill Creek (tributaries)</u> —Segment 2-4 beginning at BLM boundary in southeast corner of Section 34 to BLM boundary in eastern part of Section 20.	Kane	Perennial	Yes	None
<u>Mill Creek (tributaries)</u> —Segment 1-3 Mineral Creek from BLM property line in Section 4 to confluence with Mill Creek.	Kane	Perennial	Yes	None
<u>Hog Canyon (tributaries)</u> —Segment 16-19 beginning at headwaters to TV Hill Road in Section 10.	Kane	Intermittent	Yes	None
<u>Hog Canyon (tributaries)</u> —Segment 17-18 South Fork Hog Canyon, beginning at headwaters in Section 12 to confluence with main stem Hog Canyon in Section 11.	Kane	Intermittent	Yes	None
<u>Hog Canyon (tributaries)</u> —Segment 14-15 North Fork Hog Canyon beginning at Crocodile Road in Section 34 to confluence with main stem.	Kane	Intermittent	Yes	None
<u>Tiny Canyon</u> —Section 10-11 beginning at BLM boundary in Section 6 to confluence with Kanab Creek.	Kane	Perennial	Yes	Wildlife

Segment Description	County	Drainage Type <sup>i</sup>	Free-Flowing <sup>ii</sup>	Potential Outstandingly Remarkable Value(s)
<u>Paria River</u> —Segment 68-69 beginning at Wilderness/GSENM boundary to Arizona border; entire segment is within Paria Canyon—Vermilion Cliffs Wilderness.	Kane	Perennial	Yes	Scenic Recreational Geologic Wildlife
<u>Sevier River</u> —Segment 53-55 beginning at BLM boundary in Section 6 north to BLM boundary in Section 8.	Garfield	Perennial	No	None
<u>Sevier River</u> —Segment 52-53 from BLM boundary in Section 8 to BLM boundary in northeast part of Section 15 north of Hatch.	Garfield	Perennial	No	None
<u>Three Mile Creek</u> —Segment 56-57 beginning at the Dixie National Forest boundary in Section 11 to BLM boundary in Section 7.	Garfield	Perennial	Yes	Fish
<u>Sandy Creek</u> —Segment 58-59 beginning at BLM boundary in Section 35 to State boundary in Section 35.	Garfield	Perennial	Yes	None
<u>Bear Creek</u> —Segment 60-61 from BLM boundary in Section 6 to BLM boundary in Section 9.	Garfield	Perennial	No	None
<u>Choke Cherry Creek</u> —Segment 54-55 from BLM boundary in Section 11 to confluence with Sevier River.	Garfield	Perennial	Yes	None
<u>Birch Creek</u> —Segment 64-65 from BLM boundary in Section 11 to BLM boundary in Section 17.	Garfield	Perennial	Yes	None
<u>North Creek (tributaries)</u> —Segment 66-67 from BLM boundary to BLM boundary in Section 9-16.	Garfield	Perennial	Yes	None
<u>Upper Valley Creek</u> —Segment 58-59 from BLM boundary in Section 4 to BLM boundary in Section 17 just upstream of confluence with Birch Creek.	Garfield	Perennial	No	None

Notes:

i - Drainages were identified as one of three types:

- Perennial—Stream that flows continuously. Perennial streams are generally associated with a water table in the localities through which they flow.
- Intermittent—Stream that flows only at certain times of the year when it receives water from springs or from some surface source such as melting snow in mountainous areas.
- Ephemeral—Stream that flows only in direct response to precipitation, and whose channel is above the water table at all times.

ii "Free-flowing"—Means existing or flowing in a natural condition without impoundment, diversion, straightening, rip-rapping, or other modifications of the waterway. The existence, however, of low dams, diversion works, or other minor structures at the time any river is proposed for inclusion in the National Wild and Scenic River System shall not bar its consideration for such inclusion.

## Identification of Outstandingly Remarkable Values

Following interdisciplinary team review of the 34 segments, 18 segments were identified as being free-flowing, being either perennial or intermittent, and potentially possessing one or more ORVs. Table A13-6 identifies and describes the ORV analysis of these 18 segments.

**Table A13-6. Evaluation of Outstandingly Remarkable Values**

<p><b>North Fork Virgin River</b> Segment 48-49 Section 31-33 (northeast of Zion NP).</p> <p><b>Eligible in Section 31-32</b></p> <p><b>Tentative Classification: Wild</b></p>	<p><b>Values evaluated and determined outstandingly remarkable:</b></p> <ul style="list-style-type: none"> <li>• <b>Scenic</b>—Entire segment is rated as Class A scenery.</li> <li>• <b>Recreational</b>—Used for hiking (which requires a permit to enter Zion NP, the Narrows). Segment is highly valued for hiking, backpacking, nature study, and photography in an exceptionally scenic, wilderness-quality setting.</li> <li>• <b>Wildlife</b>—Possible neotropical migratory bird habitat (Migratory Bird Treaty Act, Executive Order 13186). Spotted owl (threatened species) designated critical habitat cooperatively managed with Zion NP.</li> </ul> <p><b>Value evaluated, not determined outstandingly remarkable:</b></p> <ul style="list-style-type: none"> <li>• <b>Geologic</b>—All exposed formations can be seen in several other canyons in the area, and are not rare or unique.</li> </ul>
<p><b>North Fork Virgin River</b> Segment 46-47 Section 34 up to private land boundary in northwest quarter of Section 24.</p> <p><b>Not Eligible</b></p>	<p><b>Values evaluated, none determined outstandingly remarkable:</b></p> <ul style="list-style-type: none"> <li>• <b>Scenic</b>—Entire segment is rated as Class A scenery, but the scenery is not notable, scarce, or exemplary when compared with other scenery in the region.</li> <li>• <b>Wildlife</b>— Spotted owl designated critical habitat is present; however, per BLM-M-8351 Section .3(c) ('Contiguous habitat conditions are such that the biological needs of the species are met') the habitat in this corridor is not contiguous and does not meet the needs of the species in this area.</li> <li>• <b>Recreational</b>—Not much recreational use due to large amounts of private property.</li> </ul>
<p><b>East Fork Virgin River</b> Segment 36-41 private land to Zion NP boundary.</p> <p><b>Eligible</b></p> <p><b>Tentative Classification: Wild, Scenic, and Recreational</b></p>	<p><b>Values evaluated and determined outstandingly remarkable:</b></p> <ul style="list-style-type: none"> <li>• <b>Scenic</b>—Entire segment is rated as Class A scenery.</li> <li>• <b>Cultural</b>—Numerous cultural resource sites considered eligible for listing in NRHP within the river canyon, plus dense concentrations of Virgin Anasazi sites situated on benches above the canyon.</li> <li>• <b>Recreational</b>—Segment is highly valued for hiking, backpacking, nature study, and photography in an exceptionally scenic, wilderness-quality setting.</li> <li>• <b>Fish</b>—Habitat and populations of sensitive fish.</li> <li>• <b>Wildlife</b>—Possible neotropical migratory bird habitat (Migratory Bird Treaty Act, Executive Order 13186), sensitive amphibian habitat. Spotted owl designated critical habitat.</li> <li>• <b>Historic</b>—John Wesley Powell exploration in the river canyon in 1872.</li> <li>• <b>Ecologic</b>—Unique plant community (hanging gardens).</li> </ul> <p><b>Value evaluated, not determined outstandingly remarkable:</b></p> <ul style="list-style-type: none"> <li>• <b>Geologic</b>—All exposed formations can be seen in several other canyons in the area, and are not rare or unique.</li> </ul>

<p><b>Orderville Gulch (Esplin Gulch)</b> Segment 44-45 Zion NP boundary to the falls; Esplin Gulch Segment 45-45A.</p> <p><b>Eligible</b></p> <p><b>Tentative Classification: Wild</b></p>	<p><b>Values evaluated and determined outstandingly remarkable:</b></p> <ul style="list-style-type: none"> <li>• <b>Scenic</b>—Entire segment is rated as Class A scenery.</li> <li>• <b>Recreational</b>—Segment is heavily used and highly valued for hiking, photography, and canyoneering. Opportunities in a canyon setting very similar to those in adjacent Zion NP.</li> <li>• <b>Wildlife</b>—Possible neotropical migratory bird habitat (Migratory Bird Treaty Act, Executive Order 13186). Spotted owl nesting habitat.</li> <li>• <b>Ecologic</b>—Unique plant community (hanging gardens).</li> </ul> <p><b>Value evaluated, not determined outstandingly remarkable:</b></p> <ul style="list-style-type: none"> <li>• <b>Geologic</b>—All exposed formations can be seen in several other canyons in the area, and are not rare or unique.</li> </ul>
<p><b>Bob Creek (tributary of Orderville Gulch)</b> Segment 42-43 from diversion to Bob Creek in Section 6.</p> <p><b>Not Eligible</b></p>	<p><b>Values evaluated, none determined outstandingly remarkable:</b></p> <ul style="list-style-type: none"> <li>• <b>Scenic</b>—Entire segment is rated as Class A scenery, but the scenery is not notable, scarce, or exemplary when compared with other scenery in the region.</li> </ul>
<p><b>Meadow Creek / Mineral Gulch</b> Segments 33-35 and 35-38 south of Highway 9 to confluence with Mineral Gulch, then to confluence with East Fork Virgin River.</p> <p><b>Eligible</b></p> <p><b>Tentative Classification: Wild</b></p>	<p><b>Values evaluated and determined outstandingly remarkable:</b></p> <ul style="list-style-type: none"> <li>• <b>Scenic</b>—Majority of segment is Class A scenery. Scenic values of sculptured slickrock and ledges untouched by human influence.</li> <li>• <b>Recreational</b>—Segment is popular with visitors seeking exceptionally scenic hiking, backpacking, photography, and nature study opportunities in a dramatic, deep canyon setting where solitude abounds.</li> </ul> <p><b>Value evaluated, not determined outstandingly remarkable:</b></p> <ul style="list-style-type: none"> <li>• <b>Geologic</b>—All exposed formations can be seen in several other canyons in the area, and are not rare or unique.</li> </ul>
<p><b>Deep Creek</b> Segment 50-51 from Washington County line to BLM boundary in Section 30.</p> <p><b>Eligible</b></p> <p><b>Tentative Classification: Wild</b></p>	<p><b>Value evaluated and determined outstandingly remarkable:</b></p> <ul style="list-style-type: none"> <li>• <b>Scenic</b>—Entire segment is rated as Class A scenery; access is limited due to surrounding private property.</li> </ul>
<p><b>Kanab Creek</b> Segment 8-9 from the falls to BLM boundary in northeast corner in Section 32.</p> <p><b>Not Eligible</b></p>	<p><b>Values evaluated, none determined outstandingly remarkable:</b></p> <ul style="list-style-type: none"> <li>• <b>Scenic</b>—Deep gorge carved in Navajo Sandstone with mature ponderosa pine; approximately 50% of segment is in Class A scenery, but the scenery is not especially outstanding when compared with other scenery in the region.</li> <li>• <b>Recreational</b>—Most recreation use is by local residents and is similar in nature to that occurring in several other similar settings near Kanab.</li> <li>• <b>Wildlife</b>—Little riparian vegetation. No Southwestern willow flycatcher habitat. Within Paunsaguant deer herd management area.</li> </ul>
<p><b>Kanab Creek</b> Segment 9-10 from Point 9 to dam north of</p>	<p><b>Values evaluated, none determined outstandingly remarkable:</b></p> <ul style="list-style-type: none"> <li>• <b>Scenic</b>—Scenery is not notable, scarce, or exemplary when</li> </ul>

<p>Kanab.</p> <p><b>Not Eligible</b></p>	<p>compared with other scenery in the region.</p> <ul style="list-style-type: none"> <li>• <b>Wildlife</b>—Neotropical migratory bird habitat; however, it is not exemplary when compared with other habitat in the region.</li> <li>• <b>Recreational</b>—Most recreation use is by local residents.</li> </ul>
<p><b>Cottonwood Creek</b></p> <p>Segment 28-29 beginning in Section 10 at BLM boundary ending at confluence with Indian Canyon.</p> <p><b>Eligible</b></p> <p><b>Tentative Classification: Wild</b></p>	<p><b>Values evaluated and determined outstandingly remarkable:</b></p> <ul style="list-style-type: none"> <li>• <b>Recreational</b>—Canyon offers exceptional non-motorized/non-mechanized recreation opportunities in an enticing canyon setting.</li> <li>• <b>Cultural</b>—Two eligible sites within segment, but NRHP-listed site 42Ka1581 Cottonwood Canyon Cliff Dwellings and four nearby rock art sites, are found in a tributary canyon to the east.</li> <li>• <b>Wildlife</b>—Neotropical migratory bird habitat (Migratory Bird Treaty Act, Executive Order 13186).</li> </ul> <p><b>Value evaluated, not determined outstandingly remarkable:</b></p> <ul style="list-style-type: none"> <li>• <b>Scenic</b>—Class A scenery; scenery is not especially notable, scarce, or exemplary when compared with other scenery in the vicinity of Kanab.</li> </ul>
<p><b>Indian Canyon</b></p> <p>Segment 26-27 from head of canyon to confluence with Cottonwood Creek.</p> <p><b>Eligible</b></p> <p><b>Tentative Classification: Wild</b></p>	<p><b>Values evaluated and determined outstandingly remarkable:</b></p> <ul style="list-style-type: none"> <li>• <b>Scenic</b>—Deep, narrow canyon, Class A scenery.</li> <li>• <b>Recreational</b>—Canyon offers non-motorized/non-mechanized recreation opportunities (e.g., hiking, canyoneering, photography, and nature study) in a highly scenic and diverse canyon setting.</li> <li>• <b>Ecologic</b>—Unique plant community (hanging gardens).</li> </ul> <p><b>Value evaluated, not determined outstandingly remarkable:</b></p> <ul style="list-style-type: none"> <li>• <b>Geologic</b>—All exposed formations can be seen in several other canyons in the area, and are not rare or unique.</li> </ul>
<p><b>South Fork Indian Canyon</b></p> <p>Segment 22-23 from head of South Fork Indian Canyon to BLM boundary in northeast corner of Section 20.</p> <p><b>Eligible</b></p> <p><b>Tentative Classification: Wild</b></p>	<p><b>Values evaluated and determined outstandingly remarkable:</b></p> <ul style="list-style-type: none"> <li>• <b>Scenic</b>—Deep, narrow canyon, Class A scenery.</li> <li>• <b>Recreational</b>—Canyon offers exceptional non-motorized/non-mechanized recreation opportunities (e.g., hiking, canyoneering, photography, and nature study) in a highly scenic and diverse canyon setting.</li> <li>• <b>Ecologic</b>—Unique plant community (hanging gardens).</li> </ul> <p><b>Value evaluated, not determined outstandingly remarkable:</b></p> <ul style="list-style-type: none"> <li>• <b>Geologic</b>—All exposed formations can be seen in several other canyons in the area, and are not rare or unique.</li> </ul>
<p><b>North Branch of South Fork Indian Canyon</b></p> <p>Segment 24-25 from point where canyon deepens to BLM boundary in southeast corner of Section 17.</p> <p><b>Eligible</b></p> <p><b>Tentative Classification: Wild</b></p>	<p><b>Values evaluated and determined outstandingly remarkable:</b></p> <ul style="list-style-type: none"> <li>• <b>Scenic</b>—Deep, narrow canyon, Class A scenery.</li> <li>• <b>Recreational</b>—Canyon offers exceptional non-motorized/non-mechanized recreation opportunities (e.g., hiking, canyoneering, photography, and nature study) in a highly scenic and diverse canyon setting.</li> <li>• <b>Cultural</b>—One recorded site, 42Ka1576 South Fork Indian Canyon Pictographs, eligible for listing in NRHP.</li> <li>• <b>Ecologic</b>—Unique plant community (hanging gardens); Zion jamesia (sensitive plant) is present.</li> </ul> <p><b>Value evaluated, not determined outstandingly remarkable:</b></p> <ul style="list-style-type: none"> <li>• <b>Geologic</b>—All exposed formations can be seen in several other canyons in the area, and are not rare or unique.</li> </ul>

<p><b>Water Canyon</b> Segment 20-21 from point where canyon deepens to BLM boundary in Section 21.</p> <p><b>Eligible</b></p> <p><b>Tentative Classification: Wild</b></p>	<p><b>Values evaluated and determined outstandingly remarkable:</b></p> <ul style="list-style-type: none"> <li>• <b>Scenic</b>—Deep, narrow canyon, Class A scenery.</li> <li>• <b>Recreational</b>—Canyon offers non-motorized/mechanized recreation opportunities (e.g., hiking, canyoneering, photography, and nature study) in a highly scenic and diverse canyon setting.</li> <li>• <b>Ecologic</b>—Unique plant community (hanging gardens); Zion jamesia (sensitive plant) is present.</li> </ul> <p><b>Value evaluated, not determined outstandingly remarkable:</b></p> <ul style="list-style-type: none"> <li>• <b>Geologic</b>—All exposed formations can be seen in several other canyons in the area, and are not rare or unique.</li> </ul>
<p><b>Hell Dive Canyon</b> Segment 30-31 from point where canyon deepens to confluence with Cottonwood Creek.</p> <p><b>Eligible</b></p> <p><b>Tentative Classification: Wild</b></p>	<p><b>Values evaluated and determined outstandingly remarkable:</b></p> <ul style="list-style-type: none"> <li>• <b>Scenic</b>—Deep, narrow canyon, Class A scenery.</li> <li>• <b>Recreational</b>—Canyon offers exceptional non-motorized/non-mechanized recreation opportunities (e.g., hiking, canyoneering, photography, and nature study) in a highly scenic and diverse canyon setting.</li> <li>• <b>Cultural</b>—One recorded rockshelter/rock art/structural site, eligible for listing in NRHP.</li> <li>• <b>Ecology</b>—Unique plant community (hanging gardens); Zion jamesia (sensitive plant) is present.</li> </ul> <p><b>Value evaluated, not determined outstandingly remarkable:</b></p> <ul style="list-style-type: none"> <li>• <b>Geologic</b>—All exposed formations can be seen in several other canyons in the area, and are not rare or unique.</li> </ul>
<p><b>Paria River</b> Segment 68-69 beginning at Wilderness/GSENM boundary to Arizona border; entire segment is within Paria Canyon–Vermilion Cliffs Wilderness.</p> <p><b>Eligible</b></p> <p><b>Tentative Classification: Wild</b></p>	<p><b>Value determined outstandingly remarkable:</b></p> <ul style="list-style-type: none"> <li>• <b>Scenic</b>—Class A scenery.</li> <li>• <b>Wildlife</b>—Neotropical migratory bird habitat (Migratory Bird Treaty Act, Executive Order 13186).</li> <li>• <b>Recreational</b>—Wilderness hiking and backpacking; opportunities for primitive experience and solitude in a dramatic, narrow desert canyon setting.</li> </ul>
<p><b>Three Mile Creek</b> Segment 56-57 beginning at the Dixie National Forest boundary in Section 11 to BLM boundary in Section 7.</p> <p><b>Eligible</b></p> <p><b>Tentative Classification: Recreation</b></p>	<p><b>Value evaluated and determined outstandingly remarkable:</b></p> <ul style="list-style-type: none"> <li>• <b>Fish</b>—Bonneville cutthroat trout (sensitive species) present.</li> </ul>

### Summary of Rivers Determined Eligible

Following analysis of the ORVs, 15 segments (identified in Table A13-7) were determined to be either perennial or intermittent, free-flowing, and possessing ORVs, judged regionally or nationally significant, and, therefore, declared eligible for inclusion in the NWSRS. These eligible segments are analyzed in the Draft RMP/EIS for their potential suitability for inclusion in the NWSRS.

**Table A13-7. Rivers Determined Eligible for Designation into the NWSRS**

<b>Segment Name</b>	<b>Outstandingly Remarkable Value(s)</b>	<b>Miles in Decision Area</b>	<b>River Corridor (acres)</b>	<b>River Corridor in Decision Area (acres)</b>	<b>% of River Corridor in Decision Area</b>
North Fork Virgin River	scenic, recreational, wildlife	2.2	500	430	86
East Fork Virgin River (three segments)	scenic, cultural, recreational, fish, wildlife, historical, ecologic	13.5	2,510	2,510	100
Orderville Gulch (Esplin Gulch)	scenic, recreational, wildlife, ecologic	3.2	640	590	92
Meadow Creek/Mineral Gulch	scenic, recreational	9.2	1,780	1,760	99
Deep Creek	scenic	0.7	210	130	62
Cottonwood Creek	recreational, cultural, wildlife	1.1	320	280	87
Indian Canyon	scenic, recreational, ecologic	0.7	160	140	88
South Fork Indian Canyon	scenic, recreational, ecologic	1.8	490	450	92
North Branch of South Fork Indian Canyon	scenic, recreational, cultural, ecologic	0.4	110	90	82
Water Canyon	scenic, recreational, ecologic	3.2	710	710	100
Hell Dive Canyon	scenic, recreational, cultural, ecologic	1.4	350	350	100
Paria River	scenic, wildlife, recreational	4.8	1,090	1,020	100
Three Mile Creek	fish	3.7	850	770	91
<b>Totals</b>		<b>45.9</b>	<b>9,720</b>	<b>9,200</b>	<b>95</b>

### III. SUITABILITY

#### Determination of Suitability

Rivers determined to be eligible for inclusion into the NWSRS are further evaluated to determine their suitability for inclusion into the national system.

The purpose of the suitability step of the study process is to determine whether eligible rivers would be appropriate additions to the national system by considering tradeoffs between corridor development and river protection. Suitability considerations include the environmental and economic consequences of designation and the manageability of a river if it were designated by Congress.

The EIS evaluates impacts that would result if the eligible rivers were determined suitable and managed to protect their free-flowing nature, tentative classification, and ORVs. It also addresses

impacts that would result if the eligible rivers are determined not suitable and their values are not provided protective management. The range of alternatives include the no action alternative (Alternative A), which does not address or provide for decisions on suitability, but leaves rivers eligible, and Alternative C, which finds all eligible rivers suitable. Alternative D finds none of the eligible rivers suitable; Alternative B finds some eligible rivers suitable. Alternative tentative classifications are also evaluated.

In addition to the impact analysis addressed by alternative, the following suitability considerations are applied to each eligible river:

- Characteristics that do or do not make the area a worthy addition to the national system
- Status of land ownership and use in the area
- Uses, including reasonably foreseeable potential uses, of the area and related waters that would be enhanced, foreclosed, or curtailed if the area were included in the national system of rivers; and the values that could be foreclosed or diminished if the area is not protected as part of the national system
- Interest by federal, tribal, state, local, and other public entities in designation or non-designation of a river, including the extent to which the administration of the river, including the costs thereof, *can be shared by the above mentioned entities*
- Ability of the agency to manage and protect the values of a river area if it were designated, and other mechanisms to protect identified values other than Wild and Scenic Rivers designation
- The estimated cost, if necessary, of acquiring lands, interests in lands, and administering the area if it were included in the national system
- The extent to which administration costs will be shared by local and state governments.

## Coordination

A series of interdisciplinary meetings was held from October 2005 through September 2006 during the suitability step of the study process. Cooperating agencies also participated in the process and attended the meetings. In addition to numerous internal meetings, a series of meetings and field trips were held in summer 2006 to review potentially eligible/suitable segments with cooperating agencies.

## Suitability Study

Public comments received on the *Draft Evaluation Report: Wild and Scenic River Eligibility Kanab Resource Management Plan* have been used to improve the documentation of the suitability considerations presented below, and to document the impacts that would result from the various alternatives. The actual determination of whether or not each eligible river segment is suitable is a decision that will be made in the Record of Decision for the Kanab Resource Management Plan (RMP).

## **North Fork Virgin River—Segment 48-49**

### **1. Characteristics that would or would not make it a worthy addition to the National Wild and Scenic Rivers System**

This segment possesses outstandingly remarkable scenic, recreational, and wildlife values. These values are described in detail below.

#### **Scenic**

This entire segment is rated Class A scenery. The lack of man-made structures; variety of natural shapes, textures, and colors; and the gradual transition from a relatively open valley stream setting to a deeply entrenched, prominent slot canyon make the North Fork Virgin River exceptionally scenic and photogenic.

#### **Recreational**

Because the North Fork serves as the main entrance to the Zion Narrows trek within Zion National Park (NP), the main recreation activity involves trekkers accessing the park. The outstanding scenery and wilderness-like setting make the trek along the river unique and exceptionally satisfying. Day use activities include hiking into portions of the canyon, nature photography, wildlife viewing, and occasional hunting. Private land upstream of the BLM segment limits off-highway-vehicle (OHV) use to only an occasional authorized vehicle. There is no motorized travel allowed beyond the east boundary of the North Fork Virgin River Wilderness Study Area (WSA).

#### **Wildlife**

This segment includes possible neotropical migratory bird habitat. It is also Mexican spotted owl designated critical habitat.

### **2. Land ownership and current use**

Ownership within the eligible segment corridor is 86 percent federally managed public lands.

This segment is used by recreationists to access the narrows within Zion NP. The upper reach of this segment, above the canyon narrows, is used for livestock grazing and dispersed recreation. Private land ownership upstream of the WSA limits motorized access to the river segment.

### **3. Uses, including reasonably foreseeable uses, that would be enhanced or curtailed if designated; and values that would be diminished if not designated**

Current recreational uses would be preserved by congressional designation, protecting the values associated with the non-motorized uses and perceived natural condition and scenic values. Recreational enhancements would be limited to increased signage and management if designated.

The North Fork Virgin River WSA includes 46 percent of the public lands along this segment. These lands have been recommended by the BLM to Congress for wilderness designation. Designation of this stream into the NWSRS would be compatible with and would enhance wilderness use and management of the area.

Congressional designation would provide permanent protection specifically for the free-flowing condition of the river, its water quality, and its ORVs. This would be in addition to protection already afforded by the WSA status. Failure to include the river segment in the NWSRS, on the other hand, would not necessarily diminish the values on the basis of which the river was determined eligible inasmuch as the area's WSA status would continue. Furthermore, many of the other land use prescriptions (e.g., Special Recreation Management Area [SRMA] designation) being considered in the EIS would also preserve and enhance such values if implemented. Such prescriptions would be temporary, however, and could be changed through plan amendment or plan revision.

Inclusion of a river into the NWSRS could preclude the construction of dams or other water-related projects if they would occur within the designated segment and have direct and/or adverse effects on the ORVs (e.g., scenic, recreational, and wildlife) or free-flowing condition. None are currently proposed. Other projects on federal lands within the designated river area, such as construction of roads, pipelines, or other structures, would not be allowed, and the lands would be closed to mineral location if Congress were to classify this segment as "wild." However, considering the area's WSA status, no such development is currently proposed or foreseeable within the federal portion of this segment. Water-related projects proposed outside the segment would be precluded only if they would invade or unreasonably diminish scenic, recreational, or wildlife values within the designated segment. None are currently proposed.

#### **4. Interest of federal, public, state, tribal, local, or other public entity in designation or non-designation, including administration sharing**

The National Park Service (NPS) has recommended the river portion that extends within Zion NP for Wild and Scenic River designation. Administration of recreation resources and activities within the segment could be shared with Zion NP.

Local and state agencies and water users oppose designation primarily over their concerns that current and potential water use of this or any eligible stream could be affected. However, there are no current or foreseen uses that would be affected. Some private citizens and regional and national conservation groups have promoted the suitability of this stream for congressional designation. The Kaibab band of the Southern Paiute Tribe supports any potential Wild and Scenic River designation. Kane County comments state, "If determined suitable the County suggests the segment begin at the WSA boundary where it incises into the canyon rather than at the proposed location in the valley."

#### **5. Manageability of the river if designated, and other means of protecting values**

Land status and classification level would not create problems for manageability. The BLM would be capable of managing this segment if it were designated, particularly with adequate funding. Wild and Scenic River designation would increase the Utah BLM's ability to compete

for agency dollars, and with increased funding and focused management, the agency's ability to deal with recreational management of the area would improve. Designation would promote national and public recognition of the values associated with this segment and further the goals and policy established by Congress in the Wild and Scenic Rivers Act.

The free-flowing nature of this stream is not currently at risk, and the identified ORVs on public lands could be effectively managed under land use prescriptions being considered in the EIS, if designation does not occur and if the management prescriptions are implemented. These prescriptions would be associated with the North Fork Virgin River WSA. The river corridor within the WSA is managed according to the Interim Management Policy (IMP). Protection would also be afforded by designation of the North Fork Virgin River SRMA. The status of the WSA, SRMA, and other management prescriptions is subject to change due to congressional action or revised land use plans. Therefore, the protection these designations afford the river values is subject to change. However, the isolation of the stream due to the very limited public access and the extreme topography inevitably provides additional protection.

#### **6. The estimated costs of administering the river, including costs for acquiring lands**

Costs could be reduced due to shared management with the NPS. Possible costs could be incurred due to acquisition of a small portion of the segment currently in private ownership. However, Kane County has a "no net loss" policy regarding private property, and would be unresponsive of BLM attempts to acquire private land. There is a concern about private riparian lands in the corridor. Other costs could be related to a management plan, if shared management with the NPS is not feasible.

#### **7. The extent to which administration costs will be shared by local and state governments**

State and local governments have made it clear that they would not share management costs of designated streams.

### **East Fork Virgin River—Segment 37-41**

#### **1. Characteristics that would or would not make it a worthy addition to the National Wild and Scenic Rivers System**

This segment possesses outstandingly remarkable scenic, recreational, cultural, historic, fish, wildlife, and ecologic values. These values are described in detail below.

##### **Scenic**

This entire segment is rated as Class A scenery, and is characterized by colorful sandstone canyon rims rising several hundred feet above the river valley floor. The river meanders frequently along a ribbon of riparian vegetation. Streamside cliffs and distant slopes and precipices range from light buff shades to dark reds and browns, all sprinkled with various greens and yellows of the many trees, shrubs, forbs, and grasses of Parunuweap Canyon. Spring and early summer blossoms add touches of red, orange, yellow, and pale blue wildflowers. Signs

of human occupation or disturbance along the river segment are rare, so the scenery is thoroughly primitive, spectacularly wild, and wholly natural in appearance.

### **Recreational**

The East Fork Virgin River flows directly into the southeastern portion of Zion NP, and the scenery is very similar to that portion of the park. Typical recreation use consists of backpackers conducting multi-day trips from the upper reach of the river within the Parunuweap WSA to the exit route near Checkerboard Mesa in the park. Day hikes to various portions of the river segment are also common. All-terrain vehicle (ATV) riders occasionally reach the river shores, although motorized travel is restricted by WSA interim management to only one or two sites along the entire river segment. Canyoneering, wildlife viewing, and nature study are frequent attractions to visitors. Hunting is allowed, but is not often encountered along the river segment because of the lack of easy motorized access and the steep slopes and cliffs along the river bank the farther downstream one travels.

### **Cultural**

There are numerous cultural resource sites considered eligible for listing in the NRHP within the river canyon, and there are dense concentrations of Virgin Anasazi sites situated on the benches above the canyon. Older and younger sites are present as well. These sites, especially those within the narrow confines of the canyon, are an important scientific resource that contributes to the ORVs of this river segment.

### **Historic**

John Wesley Powell explored this river canyon in 1872.

### **Fish**

This segment includes habitat and populations of native fish. It is also the upland watershed for sensitive fisheries downstream of the Zion NP boundary.

### **Wildlife**

This segment includes possible neotropical migratory bird habitat and sensitive amphibian habitat. It is also Mexican spotted owl designated critical habitat.

### **Ecologic**

This segment contains unique plant communities (hanging gardens).

## **2. Land ownership and current use**

Ownership within the eligible segment corridor is 100 percent federally managed public lands.

This segment has been used for accessing the Fat Man's Misery portion of Zion NP; however, Zion NP does not permit use through its portion of Parunuweap Canyon. There are high levels of non-motorized recreation use on the public lands portions of the canyon. Lands associated with

this segment are also used for livestock grazing. There are two routes (ways) within proximity to the river. Although one route is not currently used for crossing the river, the historic route of the other road crosses the river several times in the space of about 3 miles, just upstream from this river segment.

This entire segment is within the Parunuweap WSA and is managed according to the (IMP). The IMP does not allow for new developments or surface-disturbing activity.

**3. Uses, including reasonably foreseeable uses, that would be enhanced or curtailed if designated; and values that would be diminished if not designated**

Designation of this segment as a “wild” river segment could create conflict with use along identified routes (ways).

Uses and values that would be affected by congressional designation are also addressed in the cumulative impacts section of the EIS.

All of the public lands within this segment of the East Fork Virgin River are within the Parunuweap Canyon WSA. This portion of the WSA has been recommended by BLM to Congress for wilderness designation. Designation of this stream into the NWSRS would be compatible with and enhance wilderness use and management of the area.

Congressional designation would provide permanent protection specifically of the free-flowing condition of the river, its water quality, and its ORVs. This would be in addition to the protection already afforded by the WSA status. Failure to include this segment of the East Fork Virgin River in the NWSRS, on the other hand, would not necessarily diminish the values on the basis of which the river was determined eligible, inasmuch as the area’s WSA status would continue and other land use prescriptions (e.g., Parunuweap SRMA) being considered in the Draft RMP/EIS would also preserve and enhance such values if implemented. Such prescriptions would be temporary, however, and could be changed.

Inclusion of a river into the NWSRS could preclude construction of dams or other water-related projects if they would occur within the designated segment and would have direct and/or adverse effects on the ORVs or free-flowing condition. None are currently proposed. Other projects on federal lands within the designated river area, such as construction of roads, pipelines, or other structures, would not be allowed, and the lands would be closed to mineral location if Congress were to classify this segment as “wild.” However, considering the area’s WSA status, no such development is currently proposed or foreseeable. Water-related projects proposed outside the segment would be precluded only if they would invade or unreasonably diminish scenic, recreational, cultural, historic, fish, wildlife, or ecologic values within the designated segment. None are currently proposed.

#### **4. Interest of federal, public, state, tribal, local, or other public entity in designation or non-designation, including administration sharing**

The NPS has recommended the river portion that extends within Zion NP for WSR designation. Administration of recreational resources and activities within the segment could be shared with Zion NP.

State and local governments might support congressional designation of this segment, but not upstream of the identified routes (ways). Kane County representatives have noted that the county would be more comfortable supporting designation of the lower portion of the segment where the canyon is void of roads or development.

Local and state agencies and water users oppose designation primarily over their concerns that current and potential water use of this or any eligible segments could be affected. However, there are no current or foreseen uses of the river segment that would be affected. Some private citizens and regional and national conservation groups have promoted the suitability of this segment for congressional designation. The Kaibab band of the Southern Paiute Tribe supports any potential Wild and Scenic River designation.

#### **5. Manageability of the river if designated, and other means of protecting values**

See initial paragraph under suitability consideration #5 for North Fork Virgin River Segment 48-49 above. The river segment would be manageable due to public land ownership, but identified routes (ways) could create conflicts in management.

The free-flowing nature of this stream is not currently at risk, and the identified ORVs on public lands could be effectively managed under land use prescriptions being considered in the EIS, if designation does not occur and if the management prescriptions are implemented. These prescriptions would be associated with the Parunuweap Canyon WSA. The river corridor within the WSA is managed according to the IMP. Protection would also be afforded river values by the proposed Parunuweap SRMA. The status of the WSA, SRMA, and other management prescriptions is subject to change due to congressional action or revised land use plans. Therefore, the protection these designations afford the river values is subject to change. However, the isolation of the stream due to the very limited public access and the extreme topography inevitably provides additional protection.

#### **6. The estimated costs of administering the river, including costs for acquiring lands**

The initial costs of administration for the first 3 years would involve preparing a management plan. Yearly administration costs thereafter would involve plan implementation, and may include additional studies and monitoring as well as additional BLM presence in the area. Long-term costs would be related primarily to enforcement. Costs could be reduced by sharing management with the NPS. Other costs could be related to a management plan, if shared management with the NPS is not feasible.

## **7. The extent to which administration costs will be shared by local and state governments**

State and local governments have made it clear that they would not share management costs of designated streams.

### **East Fork Virgin River—Segment 36-37**

#### **1. Characteristics that would or would not make it a worthy addition to the National Wild and Scenic Rivers System**

This segment possesses outstandingly remarkable scenic, recreational, cultural, historic, fish, wildlife, and ecologic values. These values are described in detail below.

##### **Scenic**

This entire segment is rated as Class A scenery, and is characterized by colorful sandstone canyon rims rising several hundred feet above the river valley floor. The river meanders frequently along a ribbon of riparian vegetation. Streamside cliffs and distant slopes and precipices range from light buff shades to dark reds and browns, all sprinkled with various greens and yellows of the many trees, shrubs, forbs, and grasses of Parunuweap Canyon. Spring and early summer blossoms add touches of red, orange, yellow, and pale blue wildflowers. Signs of human occupation or disturbance along the river segment are limited to vehicle tracks crossing the river at several locations, so the scenery is heavily primitive, wild, and natural in appearance.

##### **Recreational**

The East Fork Virgin River flows directly into the southeastern portion of Zion NP, and the scenery is similar to that portion of the park. Typical recreation use consists of backpackers conducting multi-day trips from the upper reach of the river within the Parunuweap WSA to the exit route near Checkerboard Mesa in the park. Day hikes to various portions of the river segment are also common. ATV riders traverse the stream channel along the entire river segment. Wildlife viewing and nature study are frequent attractions to visitors. Hunting and OHV touring are other popular activities along this segment.

##### **Cultural**

There are numerous cultural resource sites considered eligible for listing in the NRHP within the river canyon, and there are dense concentrations of Virgin Anasazi sites situated on the benches above the canyon. Older and younger sites are present as well. These sites, especially those within the narrow confines of the canyon, are an important scientific resource that contributes to the ORVs of this river segment.

##### **Historic**

John Wesley Powell explored the river canyon in 1872.

**Fish**

This segment includes habitat for and populations of sensitive fish.

**Wildlife**

This segment has possible neotropical migratory bird habitat and sensitive amphibian habitat. It is also Mexican spotted owl designated critical habitat.

**Ecologic**

This segment contains unique plant communities (hanging gardens).

**2. Land ownership and current use**

Ownership within the eligible segment corridor is 100 percent federally managed public lands. The road within the corridor is adjacent to the river, crosses it several times, and is currently open to motorized recreation. The area is also popular for hunting, nature study, and horseback riding. Livestock grazing occurs along this segment and on adjacent lands; there are also range improvements to support livestock grazing. The segment is completely within the Parunuweap Canyon WSA and is managed according to the IMP.

Present within or along the majority of this segment of the East Fork Virgin River is a historical OHV route. Thus, vehicle-based recreation occurs often on the route, except for during periods of high runoff during spring snowmelt or flash flood events.

**3. Uses, including reasonably foreseeable uses, that would be enhanced or curtailed if designated; and values that would be diminished if not designated**

Designation as “recreational” would not diminish motorized use on the route or hunting. Uses and values that would be affected by congressional designation are also addressed in the cumulative impacts section of the EIS.

The entire reach of this segment of the East Fork Virgin River is within the Parunuweap Canyon WSA. This portion of the WSA has been recommended by BLM to Congress for wilderness designation. Designation of this segment into the NWSRS would be compatible with and would enhance wilderness use and management of the area. Congressional designation would provide permanent protection specifically of the free-flowing condition of the river, its water quality, and its ORVs. This would be in addition to protection already afforded to the river corridor by the WSA status. Within the WSA, failure to include this segment in the NWSRS, on the other hand, would not necessarily diminish the values for which the segment was determined eligible, inasmuch as the area’s WSA status would continue, and other land use prescriptions (e.g., SRMA designation) being considered in the EIS would also preserve and enhance such values if implemented. Such prescriptions would be temporary, however, and could be changed through plan amendment or plan revision.

Inclusion of a river into the NWSRS could preclude construction of dams or other water-related projects if they would occur within the designated segment and would have direct and/or adverse

effects on the ORVs (scenic, recreational, cultural, historic, fish, wildlife, and ecologic) or free-flowing condition. Water-related projects proposed outside the segment would be precluded only if they would invade or unreasonably diminish those ORVs within the designated segment. No such projects inside or immediately outside of the river area are currently proposed.

#### **4. Interest of federal, public, state, tribal, local, or other public entity in designation or non-designation, including administration sharing**

The NPS has recommended the river portion that extends within Zion NP for WSR designation.

Local and state agencies and water users oppose designation primarily over their concerns that current and potential water use of this or any eligible stream could be affected. However, there are no current or foreseen uses of the East Fork Virgin River that would be affected. Some private citizens and regional and national conservation groups have promoted the suitability of this stream for congressional designation. The Kaibab band of the Southern Paiute Tribe supports any potential Wild and Scenic River designation.

#### **5. Manageability of the river if designated, and other means of protecting values**

See initial paragraph under suitability consideration #5 for North Fork Virgin River Segment 48-49 above. The free-flowing nature of this segment is not currently at risk, and the identified ORVs could, for the most part, be effectively managed under land use prescriptions being considered in the EIS, if designation does not occur and if the management prescriptions are implemented. These prescriptions would be associated with visual and cultural resource management and the Parunuweap SRMA. Protection is also currently afforded this portion of the segment corridor by Parunuweap Canyon WSA. The river corridor within the WSA is managed according to the IMP. The status of the WSA, SRMA, and other management prescriptions is subject to change due to congressional action or revised land use plans. Therefore, the protection they afford the river values is subject to change.

#### **6. The estimated costs of administering the river, including costs for acquiring lands**

Costs would be the same as those for the lower East Fork of Virgin River Segment 48-49.

#### **7. The extent to which administration costs will be shared by local and state governments**

State and local governments have made it clear that they would not share management costs of designated streams.

### **Orderville Gulch (Esplin Gulch)—Segment 44-45**

#### **1. Characteristics that would or would not make it a worthy addition to the National Wild and Scenic Rivers System**

This segment possesses outstandingly remarkable scenic, recreational, geologic, wildlife, and ecologic values. These values are described in detail below.

## Scenic

This entire segment is rated Class A scenery. This segment is similar in scenic qualities to those of adjacent Zion NP. The proposed segment has a slot waterfall just less than 100 feet in height.

## Recreational

The outstanding scenery and wilderness-like setting make the trek along the river unique and exceptionally satisfying. Day use activities include hiking into portions of the canyon, nature photography, wildlife viewing, and occasional hunting. Private land upstream of the BLM segment limits OHV use to only an occasional authorized vehicle. There is no motorized travel allowed beyond the east boundary of the Orderville Canyon WSA. The trailhead parking area is located on private property that will probably be developed in the future. The trail below the waterfall is very primitive and steep. The segment enters Zion NP at the Kanab Field Office decision area boundary.

## Wildlife

This segment contains designated critical habitat for the Mexican spotted owl and is adjacent to the protected activity center (PAC) for the Mexican spotted owl.

## Ecologic

This segment contains unique plant communities (hanging gardens).

## 2. Land ownership and current use

Ownership within the eligible segment corridor is 92 percent federally managed public land. This segment is used by recreationists to access the Orderville Canyon Narrows hike in Zion NP. The upper reach of this segment, above the canyon narrows, is used for livestock grazing and dispersed recreation. Private land ownership upstream of the WSA could limit motorized access to the river segment.

## 3. Uses, including reasonably foreseeable uses, that would be enhanced or curtailed if designated; and values that would be diminished if not designated

Current recreational uses would be preserved by congressional designation, protecting the values associated with the non-motorized uses and the perceived natural condition and scenic values. Recreational enhancements would be limited to increased signage and management if designated.

The Orderville Canyon WSA includes 84 percent of the public lands along this segment. These lands have been recommended by BLM to Congress for wilderness designation. Designation of this stream into the NWSRS would be compatible with and would enhance wilderness use and management of the area.

Congressional designation would provide permanent protection specifically of the free-flowing condition of the river, its water quality, and its ORVs. This would be in addition to protection

already afforded to the lower portions of the corridor by the WSA status. Failure to include this segment of Esplin Gulch in the NWSRS, on the other hand, would not necessarily diminish the values for which the river was determined eligible, inasmuch as the area's WSA status would continue. Furthermore, many of the other land use prescriptions (e.g., SRMA designation) being considered in the EIS would also preserve and enhance such values if implemented. Such prescriptions would be temporary, however, and could be changed through plan amendment or plan revision.

See last paragraph under suitability consideration #3 for the North Fork Virgin River Segment 48-49 above.

#### **4. Interest of federal, public, state, tribal, local, or other public entity in designation or non-designation, including administration sharing**

The lower reaches of the Orderville Canyon drainage, of which Esplin Gulch is a tributary, extend within Zion NP, and the NPS has recommended for designation. Administration of recreation within the segment could be shared with Zion NP.

Local and state agencies and water users oppose designation primarily over their concerns that current and potential water use of this or any eligible stream could be affected. However, there are no current or foreseen uses that would be affected. Some private citizens and regional and national conservation groups have promoted the suitability of this stream for congressional designation. The Kaibab band of the Southern Paiute Tribe supports any potential Wild and Scenic River designation.

#### **5. Manageability of the river if designated, and other means of protecting values**

See initial paragraph under suitability consideration #5 for North Fork Virgin River Segment 48-49 above.

The free-flowing nature of this stream is not currently at risk, and the identified ORVs on public lands could be effectively managed under land use prescriptions being considered in the EIS, if designation does not occur and if the management prescriptions are implemented. These prescriptions would be associated with the Orderville Canyon WSA. The river corridor within the WSA is managed according to the IMP. Protection would also be afforded by designation of the Orderville Canyon SRMA. The status of the WSA, SRMA, and other management prescriptions is subject to change due to congressional action or revised land use plans. Therefore, the protection these designations afford the river values is subject to change. However, the isolation of the stream due to the very limited public access and the extreme topography inevitably provides additional protection.

#### **6. The estimated costs of administering the river, including costs for acquiring lands**

See suitability consideration #6 for North Fork Virgin River Segment 48-49 above.

## **7. The extent to which administration costs will be shared by local and state governments**

State and local governments have made it clear that they would not share management costs of designated streams.

### **Meadow Creek / Mineral Gulch—Segments 33-35 and 35-38**

#### **1. Characteristics that would or would not make it a worthy addition to the National Wild and Scenic Rivers System**

This segment possesses outstandingly remarkable scenic and recreational values. These values are described in detail below.

##### **Scenic**

The majority of this segment is class A scenery; with sculpted slickrock and canyon ledges untouched by human influence. Scenic values closely resemble those of side canyons of the East Fork Virgin River, of which Meadow Creek / Mineral Gulch is a tributary. Steep, towering canyon walls frame the winding creek bottom, with no road access and no human structures anywhere along the segment. Approximately 1 ½ miles upgradient from the East Fork Virgin River is a series of slot canyons.

##### **Recreational**

Recreation use tends to be light because physical access is difficult. Activities and uses probably consist mainly of occasional hikers and backpackers and a few adventurous hunters. The wild, pristine nature of the canyon offers exceptional solitude and superb opportunities for photography and wildlife and nature study.

#### **2. Land ownership and current use**

Ownership within the eligible segment corridor is 99 percent federally managed public lands.

Current uses include primitive types of recreation. The area is located within a livestock allotment, but difficult accessibility results in low use levels. This river segment is within the Parunuweap Canyon WSA and is managed according to the IMP. The IMP does not allow for new developments or surface-disturbing activity.

#### **3. Uses, including reasonably foreseeable uses, that would be enhanced or curtailed if designated; and values that would be diminished if not designated**

Uses and values that would be affected by congressional designation are also addressed in the cumulative impacts section of the EIS.

The area is popular for hunting. Livestock grazing occurs along this segment and on adjacent lands. There are range improvements to support livestock grazing. Designation could result in

increased use that could change some recreation experiences and detract from solitude opportunities.

The Meadow Creek / Mineral Gulch segment corridor is 89 percent within the Parunuweap Canyon WSA. The portion of the WSA that includes this segment has been recommended by BLM to Congress for wilderness designation. Designation of this stream into the NWSRS would be compatible with and enhance wilderness use and management of the area.

See last two paragraphs under suitability consideration #3 for North Fork Virgin River Segment 48-49 above.

#### **4. Interest of federal, public, state, tribal, local, or other public entity in designation or non-designation, including administration sharing**

Zion NP has not expressed any interest in designation. The current level of use is lower than that in the lower East Fork Virgin River.

State and local governments are unsupportive of congressional designation of this stream. Local and state agencies and water users oppose designation primarily over concerns that potential water use of this or any eligible stream could be affected. However, there are no current or foreseen water uses of Meadow Creek / Mineral Gulch that would be affected. Some private citizens and regional and national conservation groups have promoted the suitability of this stream for congressional designation. The Kaibab band of the Southern Paiute Tribe supports any potential Wild and Scenic River designation.

#### **5. Manageability of the river if designated, and other means of protecting values**

See initial paragraph under suitability consideration #5 for North Fork Virgin River Segment 48-49 above.

The BLM would be capable of managing this stream if it were designated, particularly with adequate funding. The BLM currently has little to no on-the-ground presence; however, the remoteness and difficult access have kept visitation light. Resources are fragile and could suffer degradation if visitation were to increase significantly with designation. Wild and Scenic River designation would increase the Utah BLM's ability to compete for agency dollars. With increased funding and focused management, the agency's ability to deal with recreational management of the area would improve. Designation would promote national and public recognition of the values associated with this stream and further the goals and policy established by Congress in the Wild and Scenic Rivers Act.

The free-flowing nature of this stream is not currently at risk, and the identified ORVs could be effectively managed under land use prescriptions being considered in the EIS, if designation does not occur and if the management prescriptions are implemented. These prescriptions would be associated with the Parunuweap SRMA. Protection is also currently afforded river values by the Parunuweap Canyon WSA. The river corridor within the WSA is managed according to the IMP. The status of the WSA, SRMA, and other management prescriptions is subject to change due to

congressional action or revised land use plans. Therefore, the protection they afford the river values is subject to change.

## **6. The estimated costs of administering the river, including costs for acquiring lands**

The initial costs of administration for the first 3 years would involve preparing a management plan. Yearly administration costs thereafter would involve plan implementation, and may include additional studies and monitoring as well as additional BLM presence in the area.

## **7. The extent to which administration costs will be shared by local and state governments**

State and local governments have made it clear that they would not share management costs of designated streams.

### **Deep Creek—Segment 50-51**

#### **1. Characteristics that would or would not make it a worthy addition to the National Wild and Scenic Rivers System**

This segment possesses outstandingly remarkable scenic values. The entire segment is rated as Class A scenery. This segment has scenery reminiscent of the North Fork of the Virgin River, just outside of the Zion NP boundary.

#### **2. Land ownership and current use**

Ownership within the eligible segment corridor is 62 percent federally managed public lands.

Uses include recreation (particularly horseback riding, hunting, and hiking), livestock grazing, and wildlife habitat.

#### **3. Uses, including reasonably foreseeable uses, that would be enhanced or curtailed if designated; and values that would be diminished if not designated**

Uses and values that would be affected by congressional designation are also addressed in the cumulative impacts section of the EIS.

Inclusion of a river into the NWSRS could preclude construction of dams or other water-related projects if they would occur within the designated segment and would have direct and/or adverse effects on the outstandingly remarkable scenic values or free-flowing condition. Water-related projects proposed outside the segment would be precluded only if they would invade or unreasonably diminish scenic values within the designated segment.

#### **4. Interest of federal, public, state, tribal, local, or other public entity in designation or non-designation, including administration sharing**

State and local governments are unsupportive of congressional determination of this stream. Local and state agencies, water users, and municipalities oppose designation primarily over their concerns that current and potential water use of this or any eligible stream could be affected. Some private citizens and regional and national conservation groups, however, have promoted the suitability of this stream for congressional designation. The Kaibab band of the Southern Paiute Tribe supports any potential Wild and Scenic River designation.

#### **5. Manageability of the river if designated, and other means of protecting values**

Land status and classification level would create problems for manageability because the segment is isolated and surrounded by private land. Although there are portions of this river upstream and downstream that are recommended for designation in the NWSRS, none of those are directly contiguous. The physical isolation and lack of legal public access would provide the greatest degree of protection to this area.

#### **6. The estimated costs of administering the river, including costs for acquiring lands**

The initial costs of administration for the first 3 years would involve preparing a management plan. Yearly administration costs thereafter would involve plan implementation, and may include additional studies and monitoring as well as a BLM presence in the area. If other portions of the river were designated, cost-sharing with the other agencies could reduce administrative costs.

#### **7. The extent to which administration costs will be shared by local and state governments**

State and local governments have made it clear that they would not share management costs of designated streams.

### **Cottonwood Creek—Segment 28-29**

#### **1. Characteristics that would or would not make it a worthy addition to the National Wild and Scenic Rivers System**

Cottonwood Creek possesses outstandingly remarkable recreational, cultural, and wildlife values. These values are described in detail below.

##### **Recreational**

Cottonwood Creek offers exceptional non-motorized/non-mechanized recreation opportunities in a scenic, enticing canyon setting. The variety of topography, vegetation, geology, and wildlife create a setting that is highly attractive to both day use hikers and overnight campers.

## **Cultural**

There are two sites eligible for listing in the NRHP within the segment. NRHP -listed site 42Ka1581 Cottonwood Canyon Cliff Dwellings is within the segment corridor.

## **Wildlife**

This segment includes neotropical migratory bird habitat; it is also a limited deer use area.

## **2. Land ownership and current use**

Ownership within the eligible segment corridor is 87 percent federally managed public lands.

This segment is adjacent to the Moquith Mountain WSA, and 9 percent of the corridor is within the WSA, providing for primitive recreation. While the segment is not totally within the WSA, the corridor offers a scenic, solitary backcountry experience. The river segment is used for occasional recreational activities, including hunting, hiking, camping, wildlife viewing, and nature photography. There are no motorized routes along the segment. Although the area is open to livestock grazing, no use has occurred in the Water Canyon Allotment for several years. Fredonia has permitted water and public lands development rights dating to at least the 1940s. This segment corridor is used as a surface-water collection area for the Fredonia water source.

## **3. Uses, including reasonably foreseeable uses, that would be enhanced or curtailed if designated; and values that would be diminished if not designated**

Congressional designation would provide permanent protection specifically of the free-flowing condition of the river, its water quality, and its ORVs. Designation of this river into the NWSRS would be compatible with and would enhance wilderness use and management of the Moquith Mountain WSA.

Inclusion of a river into the NWSRS could preclude construction of dams or other water-related projects if they would occur within the designated segment and would have direct and/or adverse effects on the ORVs or free-flowing condition. This could conflict with current water use of the surface water collection system and would prevent or restrict future water development. Other projects on federal lands within the designated river area, such as construction of roads, pipelines, or other structures, would not be allowed, and the lands would be closed to mineral location if Congress were to classify this segment as “wild.” Water-related projects proposed outside the segment would be precluded only if they would invade or unreasonably diminish recreational, cultural, or wildlife values within the designated segment. In addition to limiting future water developments for the town of Fredonia, congressional designation of this segment would advertise the canyons to the public, creating additional visitation, which would potentially impact the town’s water quality.

On the other hand, failure of Congress to include this segment in the NWSRS would not necessarily diminish the values on the basis of which the river was determined eligible because of the SRMA and Area of Critical Environmental Concern (ACEC) designations proposed for the canyon and the overlap and/or presence of the Moquith Mountain WSA. Likewise, the

Cottonwood Canyon ACEC provides for the protection of certain values within the river corridor. Furthermore, the proposed Moquith Mountain SRMA would protect certain resources that contribute to the recreational values within the river segment. However, the status of the WSA, proposed SRMA, ACEC, and other management prescriptions are subject to change due to congressional action or future revisions to land use plans. Such prescriptions would be temporary, however, and could be changed through plan amendment or plan revision.

#### **4. Interest of federal, public, state, tribal, local, or other public entity in designation or non-designation, including administration sharing**

Local and state agencies, municipalities, and water users oppose designation primarily over their concerns that current and potential water use of this or any eligible segment in this area could be affected. These organizations have expressed concerns that existing water rights and developments could be affected and that opportunities for future water development could be foreclosed, not only within the designated river segments but also upstream or downstream of these segments. Some private citizens and regional and national conservation groups have encouraged or promoted the suitability of this segment for congressional designation. The Kaibab band of the Southern Paiute Tribe supports any potential Wild and Scenic River designation.

#### **5. Manageability of the river if designated, and other means of protecting values**

The BLM would be capable of managing this segment if it were designated, particularly with adequate funding. Congressional designation of this segment into the NWSRS would increase the BLM's ability to compete for agency dollars, and with increased funding and focused management, the agency's ability to deal with recreational and other management of the area would improve. Designation would promote national and public recognition of the values associated with this segment and further the goals and policy established by Congress in the Wild and Scenic Rivers Act.

Designation of this segment would not result in a substantial change in management of the river corridor from current management. Other protective management prescriptions currently in place that would complement NWSR management if the segment were designated are those for OHV use, fluid minerals leasing, SRMAs, ACECs, WSAs, riparian habitat, and visual resources. The current management would provide a large degree of continuity and make the adjustment into management of a "wild" and "scenic" area easy because current objectives are similar to those that would result from congressional designation.

The free-flowing nature of this segment is not currently at risk, and the identified ORVs could be effectively managed with existing and other land use prescriptions being considered in the EIS, if designation does not occur and if the management prescriptions are implemented. However, the status of the WSA, SRMA, ACEC, and other management prescriptions are subject to change due to congressional action or revised land use plans. Therefore, the protection they afford the river values is subject to change.

## **6. The estimated costs of administering the river, including costs for acquiring lands**

The initial costs of administration for the first 3 years would involve preparing a management plan. Yearly administration costs thereafter would involve plan implementation, and may include additional studies and monitoring as well as additional BLM presence in the area. Funding is not expected to be sought for acquisition of adjacent private land (given willing sellers) because it would not be necessary to acquire these lands to adequately manage the designated segments.

## **7. The extent to which administration costs will be shared by local and state governments**

Local governments have made it clear that they would not share management costs if this segment were designated.

### **Indian Canyon—Segment 26-27**

#### **1. Characteristics that would or would not make it a worthy addition to the National Wild and Scenic Rivers System**

This segment possesses outstandingly remarkable scenic, recreational, and ecologic values. These values are described in detail below.

##### **Scenic**

This canyon has Class A scenery, is picturesque, and is tightly confined in slickrock walls that are punctuated with enticing alcoves and dramatic amphitheaters. The lively small stream adds a water feature, and brilliant green vegetation winds through a landscape of colorful rimrock.

##### **Recreational**

Indian Canyon offers non-motorized, non-mechanized recreational opportunities in an exceptionally scenic canyon characterized by slickrock cliffs, ledges and pour-overs, scattered ponderosa pines, and many alcoves and recesses fringed with pockets of scrub oak and riparian vegetation.

##### **Ecologic**

This segment contains unique plant communities (hanging gardens).

#### **2. Land ownership and current use**

Ownership within the eligible segment corridor is 88 percent federally managed public lands.

This segment is adjacent to the Moquith Mountain WSA, with 17 percent of the corridor within the WSA, providing for primitive recreation. Although the segment is not totally within the WSA, the corridor offers a scenic, solitary backcountry experience. Although the area is open to livestock grazing, no use has occurred in the Water Canyon Allotment for several years.

Fredonia has permitted water and public lands development rights dating to at least the 1940s. This segment corridor is used as a surface-water collection area for the Fredonia water source.

**3. Uses, including reasonably foreseeable uses, that would be enhanced or curtailed if designated; and values that would be diminished if not designated**

See information under suitability consideration #3 for the Cottonwood Canyon segment above.

**4. Interest of federal, public, state, tribal, local, or other public entity in designation or non-designation, including administration sharing**

See information under suitability consideration #4 for the Cottonwood Canyon segment above.

**5. Manageability of the river if designated, and other means of protecting values**

See information under suitability consideration #5 for the Cottonwood Canyon segment above.

**6. The estimated costs of administering the river, including costs for acquiring lands**

See information under suitability consideration #6 for the Cottonwood Canyon segment above.

**7. The extent to which administration costs will be shared by local and state governments**

See information under suitability consideration #7 for the Cottonwood Canyon segment above.

**South Fork Indian Canyon—Segment 22-23**

**1. Characteristics that would or would not make it a worthy addition to the National Wild and Scenic Rivers System**

This segment possesses outstandingly remarkable scenic, recreational, and ecologic values. These values are described in detail below.

**Scenic**

This canyon has Class A scenery, is picturesque, and is tightly confined in slickrock walls that are punctuated with enticing alcoves and dramatic amphitheaters. The lively small stream adds a water feature, and brilliant green vegetation winds through a landscape of colorful rimrock.

**Recreational**

The South Fork Indian Canyon offers non-motorized, non-mechanized recreational opportunities in an exceptionally scenic canyon characterized by slickrock cliffs, ledges and pour-overs, scattered ponderosa pines, and many alcoves and recesses fringed with pockets of scrub oak and riparian vegetation.

## **Ecologic**

This segment contains unique plant communities (hanging gardens).

### **2. Land ownership and current use**

Ownership within the eligible segment corridor is 92 percent federally managed public lands.

This segment corridor is 100 percent contained within the Moquith Mountain WSA and is managed according to the IMP, which provides for primitive recreation. Uses also include livestock grazing, recreation, and wildlife habitat. The existing Water Canyon/South Fork Indian Canyon ACEC also overlaps 9 percent of the segment corridor. Although the area is open to livestock grazing, no use has occurred in the Water Canyon Allotment for several years. Fredonia has permitted water and public lands development rights dating to at least the 1940s. This segment corridor is used as a surface-water collection area for the Fredonia water source.

### **3. Uses, including reasonably foreseeable uses, that would be enhanced or curtailed if designated; and values that would be diminished if not designated**

See information under suitability consideration #3 for the Cottonwood Canyon segment above.

### **4. Interest of federal, public, state, tribal, local, or other public entity in designation or non-designation, including administration sharing**

See information under suitability consideration #4 for the Cottonwood Canyon segment above.

### **5. Manageability of the river if designated, and other means of protecting values**

See information under suitability consideration #5 for the Cottonwood Canyon segment above.

### **6. The estimated costs of administering the river, including costs for acquiring lands**

See information under suitability consideration #6 for the Cottonwood Canyon segment above.

### **7. The extent to which administration costs will be shared by local and state governments**

See information under suitability consideration #7 for the Cottonwood Canyon segment above.

## **North Branch of South Fork Indian Canyon—Segment 24-25**

### **1. Characteristics that would or would not make it a worthy addition to the National Wild and Scenic Rivers System**

This segment possesses outstandingly remarkable scenic, recreational, cultural, and ecologic values. These values are described in detail below.

## Scenic

This canyon has Class A scenery, is picturesque, and is tightly confined in slickrock walls that are punctuated with enticing alcoves and dramatic amphitheaters. The lively small stream adds a water feature, and brilliant green vegetation winds through a landscape of colorful rimrock.

## Recreational

The North Branch of South Fork Indian Canyon offers non-motorized, non-mechanized recreational opportunities in an exceptionally scenic canyon characterized by slickrock cliffs, ledges and pour-overs, scattered ponderosa pines, and many alcoves and recesses fringed with pockets of scrub oak and riparian vegetation.

## Cultural

This segment corridor contains one recorded cultural site, 42Ka1576 South Fork Indian Canyon Pictographs, that is eligible for listing in the NRHP. This is a significant rock art panel and is a popular local attraction and cultural interpretive site.

## Ecologic

This segment contains unique plant communities (hanging gardens). The sensitive plant species *Zion jamesia* is also present.

## 2. Land ownership and current use

Ownership within the eligible segment corridor is 82 percent federally managed public lands.

This segment corridor is 100 percent contained within the Moquith Mountain WSA and is managed according to the IMP, which provides for primitive recreation. Uses also include livestock grazing, recreation, and wildlife habitat. Primary recreational uses include rock art viewing, nature study, photography, and hiking. Local tourism boards promote this area for its prehistoric rock art and other cultural and historical values.

The existing Water Canyon/South Fork Indian Canyon ACEC also overlaps 6 percent of the segment corridor. Although the area is open to livestock grazing, no use has occurred in the Water Canyon Allotment for several years. Fredonia has permitted water and public lands development rights dating to at least the 1940s. This segment corridor is used as a surface-water collection area for the Fredonia water source.

## 3. Uses, including reasonably foreseeable uses, that would be enhanced or curtailed if designated; and values that would be diminished if not designated

See information under suitability consideration #3 for the Cottonwood Canyon segment above.

**4. Interest of federal, public, state, tribal, local, or other public entity in designation or non-designation, including administration sharing.**

See information under suitability consideration #4 for the Cottonwood Canyon segment above.

**5. Manageability of the river if designated, and other means of protecting values**

See information under suitability consideration #5 for the Cottonwood Canyon segment above.

**6. The estimated costs of administering the river, including costs for acquiring lands**

See information under suitability consideration #6 for the Cottonwood Canyon segment above.

**7. The extent to which administration costs will be shared by local and state governments**

See information under suitability consideration #7 for the Cottonwood Canyon segment above.

**Water Canyon—Segment 20-21****1. Characteristics that would or would not make it a worthy addition to the National Wild and Scenic Rivers System**

This segment possesses outstandingly remarkable scenic, recreational, and ecologic values. These values are described in detail below.

**Scenic**

This canyon has Class A scenery, is picturesque, and is tightly confined in slickrock walls that are punctuated with enticing alcoves and dramatic amphitheaters. The lively small stream adds a water feature, and brilliant green vegetation winds through a landscape of colorful rimrock.

**Recreational**

The South Fork Indian Canyon offers non-motorized, non-mechanized recreational opportunities in an exceptionally scenic canyon characterized by slickrock cliffs, ledges and pour-overs, scattered ponderosa pines, and many alcoves and recesses fringed with pockets of scrub oak and riparian vegetation.

**Ecologic**

This segment contains unique plant communities (hanging gardens). The sensitive plant species *Zion jamesia* is also present.

**2. Land ownership and current use**

Ownership within the eligible segment corridor is 100 percent federally managed public lands.

This segment corridor is 100 percent within the Moquith Mountain WSA and is managed according to the IMP, which provides for primitive recreation. The IMP does not allow for new developments or surface-disturbing activity. Uses also include livestock grazing, recreation, and wildlife habitat. Other uses include more primitive types of recreation, such as hiking and camping by scout groups.

The existing Water Canyon/South Fork Indian Canyon ACEC also overlaps 17 percent of the segment corridor. Although the area is open to livestock grazing, no use has occurred in the Water Canyon Allotment for several years. Fredonia has permitted water and public lands development rights dating to at least the 1940s. This segment corridor is used as a surface-water collection area for the Fredonia water-source.

**3. Uses, including reasonably foreseeable uses, that would be enhanced or curtailed if designated; and values that would be diminished if not designated**

See information under suitability consideration #3 for the Cottonwood Canyon segment above.

**4. Interest of federal, public, state, tribal, local, or other public entity in designation or non-designation, including administration sharing**

See information under suitability consideration #4 for the Cottonwood Canyon segment above.

**5. Manageability of the river if designated, and other means of protecting values**

See information under suitability consideration #5 for the Cottonwood Canyon segment above.

**6. The estimated costs of administering the river, including costs for acquiring lands**

See information under suitability consideration #6 for the Cottonwood Canyon segment above.

**7. The extent to which administration costs will be shared by local and state governments**

See information under suitability consideration #7 for the Cottonwood Canyon segment above.

**Hell Dive Canyon—Segment 30-31**

**1. Characteristics that would or would not make it a worthy addition to the National Wild and Scenic Rivers System**

This segment possesses outstandingly remarkable scenic, recreational, cultural, and ecologic values. These values are described in detail below.

## Scenic

This canyon has Class A scenery, is picturesque, and is tightly confined in slickrock walls that are punctuated with enticing alcoves and dramatic amphitheaters. The lively small stream adds a water feature, and brilliant green vegetation winds through a landscape of colorful rimrock.

## Recreational

The South Fork Indian Canyon offers non-motorized, non-mechanized recreational opportunities in an exceptionally scenic canyon characterized by slickrock cliffs, ledges and pour-overs, scattered ponderosa pines, and many alcoves and recesses fringed with pockets of scrub oak and riparian vegetation.

## Cultural

One recorded rockshelter/rock art/structural site, 42Ka1695, in this segment is considered eligible for listing in the NRHP. No other sites have been documented in this canyon, but there is potential for finding additional sites in the cliffs and overhangs in the vicinity.

## Ecologic

This segment contains unique plant communities (hanging gardens). The sensitive plant species *Zion jamesia* is also present.

## 2. Land ownership and current use

Ownership within the eligible segment corridor is 100 percent federally managed public lands.

This segment corridor is 88 percent within the Moquith Mountain WSA and is managed according to the IMP, which provides for primitive recreation. The IMP does not allow for new developments or surface-disturbing activity. Uses include recreation, particularly horseback riding and hiking, livestock grazing, and wildlife habitat. Although the area is open to livestock grazing, no use has occurred in the Water Canyon Allotment for several years. Fredonia has permitted water and public lands development rights dating to at least the 1940s. This segment corridor is used as a surface-water collection area for the Fredonia water-source.

## 3. Uses, including reasonably foreseeable uses, that would be enhanced or curtailed if designated; and values that would be diminished if not designated

See information under suitability consideration #3 for the Cottonwood Canyon segment above.

## 4. Interest of federal, public, state, tribal, local, or other public entity in designation or non-designation, including administration sharing

See information under suitability consideration #4 for the Cottonwood Canyon segment above.

**5. Manageability of the river if designated, and other means of protecting values**

See information under suitability consideration #5 for the Cottonwood Canyon segment above.

**6. The estimated costs of administering the river, including costs for acquiring lands**

See information under suitability consideration #6 for the Cottonwood Canyon segment above.

**7. The extent to which administration costs will be shared by local and state governments**

See information under suitability consideration #7 for the Cottonwood Canyon segment above.

**Paria River—Segment 68-69****1. Characteristics that would or would not make it a worthy addition to the National Wild and Scenic Rivers System**

The Paria River possesses outstandingly remarkable scenic, recreational, and wildlife values. These values are described in detail below.

**Scenic**

Scenery within the Paria River canyon includes sheer, towering walls of colorful sandstone that frame overhead skies and a ribbon of water accented by wildflowers, intermittent scatterings of shrubs and grasses, and occasional cottonwood trees. Late summer thunderstorms provide contrasts in lighting, color, and texture. The deeply entrenched canyon wilderness also provides spectacular nighttime views through canyon walls reaching several hundred feet above the river bottom.

**Recreational**

The Paria River canyon offers the opportunity for spectacular hiking and backpacking in a unique, deeply entrenched, desert canyon far from the sights and sounds of civilization. Permits for overnight trips through the Paria are sought by visitors throughout the United States and overseas. The colorful, sheer sandstone cliffs bordering lush riparian vegetation provide exceptional photo opportunities. Wildlife viewing leads to frequent sightings of Desert bighorn sheep and a variety of raptors for visitors to this site. Day hikers can access portions of the canyon a few miles downstream from the White House campground and trailhead. Overnight visitors typically start their trek at White House and continue for 3 to 5 days, hiking the 38-mile stretch that terminates at Lee's Ferry on the Colorado River. Because the number of permits is regulated on a daily basis, backpackers have excellent opportunities to experience solitude and primitive, unconfined recreation in a unique setting.

## **Wildlife**

The Paria River is important to numerous avian wildlife species, notably the peregrine falcon. The area also contains suitable habitat for the Mexican spotted owl, the Southwestern willow flycatcher, and the California condor. This river segment provides excellent nesting and roosting habitat for the Mexican spotted owl and the peregrine falcon, although their presence has not been confirmed to date. The river segment corridor is also important lambing habitat for Desert bighorn sheep.

## **2. Land ownership and current use**

Ownership within the eligible segment corridor is 100 percent federally managed public lands. This segment corridor is 100 percent within the Paria Canyon–Vermilion Cliffs Wilderness Area and is managed according to the Wilderness Act and the Wilderness Management Plan, which specify managing the area for naturalness and providing opportunities for primitive recreation and solitude.

## **3. Uses, including reasonably foreseeable uses, that would be enhanced or curtailed if designated; and values that would be diminished if not designated**

Designation of this segment into the NWSRS would be compatible with and would enhance wilderness use and management of the area. Congressional designation would provide permanent protection specifically of the free-flowing condition of the river, its water quality, and its ORVs. This would be in addition to protection already afforded to the segment corridor by the wilderness area. A river management plan would be prepared on designation. As part of that effort, current activities may be monitored to ensure that activities are consistent with the goals of the designation.

Failure to include this segment in the NWSRS, on the other hand, would not necessarily diminish the values on the basis of which the segment was determined eligible, inasmuch as the area's wilderness area status would continue, and other land use prescriptions (e.g., SRMA designation) being considered in the EIS would also preserve and enhance such values if implemented. Such prescriptions would be temporary, however, and could be changed through plan amendment or plan revision.

Inclusion of a river in the NWSRS could preclude construction of dams or other water-related projects if they would occur within the designated segment and would have direct and/or adverse effects on the ORVs or free-flowing condition. Water-related projects proposed outside the segment would be precluded only if they would invade or unreasonably diminish those ORVs within the designated segment. No such projects inside or immediately outside of the river area are currently proposed.

## **4. Interest of federal, public, state, tribal, local, or other public entity in designation or non-designation, including administration sharing**

State and local governments are unsupportive of congressional designation of this stream. Some private citizens and regional and national conservation groups have promoted congressional

designation of this river. The Kaibab band of the Southern Paiute Tribe supports any potential Wild and Scenic River designation.

### **5. Manageability of the river if designated, and other means of protecting values**

See initial paragraph under suitability consideration #5 for the North Fork Virgin River Segment 48-49 above.

If the eligible segment of Paria Canyon was found to be not suitable and subsequently not designated by Congress, the ORVs (scenic, recreational, and wildlife) for which the segment is found to be eligible would not necessarily diminish. The proposed Paria Canyon SRMA would be managed to offer a certain degree of protection to recreational values. Protection is also currently afforded ORVs by the existing wilderness designation. The wilderness, including this entire river segment, is managed according to the *Wilderness Management Plan for Paria Canyon–Vermilion Cliffs Wilderness*, which allows for no new permanent developments or surface-disturbing activities. The status of the SRMA and other management prescriptions are subject to change due to congressional action or revised land use plans. Therefore, the protection they afford the river values is subject to change.

### **6. The estimated costs of administering the river, including costs for acquiring lands**

The initial costs of administration for the first 3 years would involve preparing a management plan. Yearly administration costs thereafter would involve plan implementation, and may include additional studies and monitoring as well as additional BLM presence in the area. Costs could be reduced if management were shared with the Grand Staircase-Escalante National Monument and the Arizona Strip Field Office, both of which manage segments upstream and downstream.

### **7. The extent to which administration costs will be shared by local and state governments**

State and local governments have made it clear that they would not share management costs if the Paria River were designated.

## **Three Mile Creek—Segment 56-57**

### **1. Characteristics that would or would not make it a worthy addition to the National Wild and Scenic Rivers System**

Three Mile Creek possesses an outstandingly remarkable fish value. Bonneville cutthroat trout (sensitive species) are present.

### **2. Land ownership and current use**

Ownership within the eligible segment corridor is 91 percent federally managed public lands. Uses include ranching, livestock grazing, wildlife habitat, and occasional recreational fishing.

**3. Uses, including reasonably foreseeable uses, that would be enhanced or curtailed if designated; and values that would be diminished if not designated**

A primary objective for the management of species managed by the Utah Division of Wildlife Resources (UDWR) is to enhance streams' coldwater fisheries habitat and populations. Designation would directly contribute to these objectives and also provide for protection of the other values within the stream corridor.

Inclusion of this segment in the NWSRS could preclude construction of dams or other water-related projects within the designated segment. This would enhance the viability of the Bonneville cutthroat trout population and protect the free-flowing condition. Other projects on federal lands within the designated river area, such as construction of roads, recreational facilities, or other structures, may be allowed along the segment classified by Congress as "recreational."

Failure to include Three Mile Creek in the NWSRS, on the other hand, would not necessarily diminish the values for which the river was determined eligible, inasmuch as management implemented in coordination with the UDWR would also preserve and enhance such values.

**4. Interest of federal, public, state, tribal, local, or other public entity in designation or non-designation, including administration sharing**

State and local governments are unsupportive of congressional designation of this stream. These governments oppose designation primarily over their perceptions that existing water rights could be affected and that opportunities for future water development could be foreclosed. The Kaibab band of the Southern Paiute Tribe supports any potential Wild and Scenic River designation.

**5. Manageability of the river if designated, and other means of protecting values**

See initial paragraph under suitability consideration #5 for the North Fork Virgin River Segment 48-49 above.

Cooperative management of Three Mile Creek by the BLM and the UDWR would be necessary if the stream were to be congressionally designated. This would be expected to be productive because current federal and state objectives for the area are consistent. The free-flowing nature of this stream is not currently at risk, and the identified ORVs on public lands could be effectively managed under land use prescriptions being considered in the EIS, if designation does not occur and if the management prescriptions are implemented.

**6. The estimated costs of administering the river, including costs for acquiring lands**

Initial costs of administration for the first 3 years would involve preparing a management plan. Yearly administration cost thereafter would involve plan implementation, and may include additional studies, monitoring, and additional BLM presence in the area. The BLM would make efforts to work cooperatively with the State of Utah to manage Three Mile Creek on designation.

**7. The extent to which administration costs will be shared by local and state governments**

Local governments have made it clear that they would not share management costs if Three Mile Creek were designated. Any cooperative management of Three Mile Creek between the BLM and the UDWR would potentially require commitments from both entities for adequate funding.

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# APPENDIX 12—LETTER FROM STATE HISTORIC PRESERVATION OFFICER RELETED TO SECTION 106 CONSULTAION



State of Utah

JON M. HUNTSMAN, JR.  
Governor

GARY R. HERBERT  
Lieutenant Governor

July 17, 2008

Department of Community and Culture

PALMER DePAULIS  
Executive Director

State History

PHILIP F. NOTARIANNI  
Division Director



Matt Zweifel  
Archaeologist  
Grand Staircase-Escalante National Monument  
and  
Kanab Field Office  
190 East Center Street  
Kanab UT 84741

RE: Kanab Field Office RMP Matrix

In reply, please refer to Case No. 07-1848

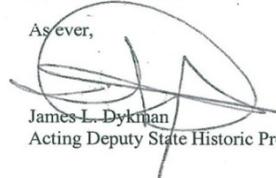
Dear Mr. Zweifel:

The Utah State Historic Preservation Office received your request for our comment on the above referenced project.

We concur with your determinations made by BLM in the Kanab Field Office RMP. [Reference SHPO RMP letter 6-25-08MZ.docx.].

This letter serves as our comment on the determinations you have made, within the consultation process specified in §36CFR800.4. If you have questions, please contact me at (801) 533-3555 or [jdykman@utah.gov](mailto:jdykman@utah.gov).

As ever,

  
James L. Dykman  
Acting Deputy State Historic Preservation Officer - Archaeology



UTAH STATE HISTORICAL SOCIETY  
ANTIQUITIES  
HISTORIC PRESERVATION  
RESEARCH CENTER & COLLECTIONS

300 S. RIO GRANDE STREET, SALT LAKE CITY, UT 84101-1182 · TELEPHONE 801 533-3500 · FACSIMILE 801 533-3503 · HISTORY.UTAH.GOV

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# APPENDIX 13—LETTER FROM U.S. FISH AND WILDLIFE SERVICE RELATED TO THE BIOLOGICAL OPINION



United States Department of the Interior  
 FISH AND WILDLIFE SERVICE  
 UTAH FIELD OFFICE  
 2369 WEST ORTON CIRCLE, SUITE 50  
 WEST VALLEY CITY, UTAH 84119

September 29, 2008

In Reply Refer To  
 FWS/R6  
 ES/UT  
 06-F-0342  
 6-UT-08-F-020

RECEIVED  
 BUREAU OF LAND MANAGEMENT  
 SEP 30 2008  
 KANAB FIELD OFFICE

Memorandum

To: Field Office Manager, Bureau of Land Management, Kanab Field Office, 318 North 100 East, Kanab, Utah 84741

From: Utah Field Supervisor, U.S. Fish and Wildlife Service, Ecological Services, West Valley City, Utah

Subject: Biological Opinion for BLM Resource Management Plan (RMP), Kanab Field Office (KFO)

This document transmits the Fish and Wildlife Service’s (Service) Biological Opinion based on our review of potential activities described under the Resource Management Plan of the Utah Bureau of Land Management (BLM) Kanab Field Office’s (KFO) and their potential effects on the federally threatened Mexican spotted owl (*Strix occidentalis lucida*), Utah prairie dog (*Cynomys parvidens*), Siler pincushion cactus (*Pediocactus sileri*), and Welsh’s milkweed (*Asclepias welshii*); and federally endangered southwestern willow flycatcher (*Empidonax traillii extimus*) in accordance with section 7 of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.). In addition, this document includes the Conference Opinion for the candidate species Yellow-billed cuckoo (*Coccyzus americanus occidentalis*) and Coral Pink Sand Dunes tiger beetle (*Cincindella limbata albissima*), and the experimental, non-essential population of the endangered California Condor (*Gymnogyps californianus*). Critical habitat was designated for the Mexican spotted owl on February 01, 2001 and was re-designated August 31, 2004 (66 FR 8530, 69 FR 53181). Critical habitat was designated for the southwestern willow flycatcher on October 12, 2004 (69 FR 60705). Your July 21, 2008 request for formal consultation for all aforementioned species was received on July 22, 2008.

Kanab FO BLM Resource Management Plan proposed activities are categorized into the following 23 programs:

- Air Quality
- Soil Resources
- Water Resources
- Vegetation Management

Special Status Species Management  
Fish and Wildlife Management  
Fire Management  
Cultural Resources  
Paleontological Resources  
Visual Resources  
Forestry and Woodland Resources  
Livestock Grazing Management  
Recreation Management  
Transportation Management  
Lands and Realty Management  
Minerals and Energy Management  
Special Management Areas Programs (5)  
Special Designations Management – Other Designations  
Hazardous Materials and Safety Management

This Biological Opinion and Conference Opinion is based on information provided in the July 21<sup>st</sup> 2008 Biological Assessment, personal communications between the Service's biologists and the BLM's biologists, telephone conversations, email correspondence, conference calls, planning meetings, and other sources of information. A complete administrative record of this consultation is on file at this office.

#### **Consultation History**

This section summarizes significant steps in the consultation process. Additional correspondence, and email transmissions, that occurred between May 8, 2008, and September 25, 2008 are documented in the administrative record for this consultation.

- May 9, 2008: BLM electronically sent a draft Biological Assessment for the Kanab BLM Field Office Resource Management Plan to the Service for review;
- May 2008 through June 26, 2008: The Service reviewed and provided comments on the draft Biological Assessment;
- July 22, 2008: We received the final version of the KFO Biological Assessment and began formal consultation;
- September 12, 2008: A draft Biological Opinion was provided to the Kanab Field Office;
- September 23-25, 2008: The BLM provided comments which were integrated into the Biological Opinion.

## RE-INITIATION STATEMENT

This is a program-level document that does not include project specific detail for actions authorized by the Resource Management Plan. Additional consultation with USFWS will be necessary for any authorized project specific action that may impact any listed species. This concludes formal consultation on the Kanab BLM Field Office Resource Management Plan. As provided in 50 CFR §402.16, re-initiation of formal consultation is required if: 1) new information reveals effects of the agency action that may impact listed species or critical habitat in a manner or to an extent not considered in this opinion, 2) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this opinion, 3) a new species is listed or critical habitat designated that may be affected by the action, or 4) a project proposing biological control measures is proposed.

Thank you for your interest in conserving threatened and endangered species. If we can be of further assistance, please contact Katherine Richardson at (801) 975-3330 ext. 125 or Laura Romin at ext. 123.

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## APPENDIX 14—GRAZING ALLOTMENT FORAGE ALLOCATION

Allotments	Number	Federal Acres	Livestock Kind <sup>1</sup>	Active Livestock Permitted Use (AUMs)	Suspended Livestock Permitted Use (AUMs)	Wildlife Allocation (AUMs)	Total AUMs Allocated <sup>2</sup>
Alton	24002	392	C	5	15	5	10
Art Canyon	24003	8,927	C	352	198	344	696
Bald Knoll	24004	6,741	C	215	197	148	363
Barracks Point	24005	8,140	C	170	249	262	432
Big Flat	15031	6,464	C	529	0	*	529
Black Mountain	24007	1,255	C	42	92	78	120
Brown Canyon	24011	1,591	C	20	0	46	168
Buck Knoll	24012	4,134	C	153	116	300	453
Buck Pasture	24013	2,708	C	100	70	64	164
Bunting Canyon	14014	339	C	4	19	6	10
Burnt Cedar Point	24015	3,054	C	105	223	180	285
Burnt Flat	24016	897	C	20	46	48	68
Carmel Junction	24021	3,356	C	14	198	21	35
Cave Creek	24092	645	C	16	0	61	77
Chris Spring	34022	7,265	C	216	473	160	376
Circleville Canyon	00809	4,280	C	88	0	*	88
Clay Flat	24023	5,286	C	210	120	119	329
Coal Hollow	04165	536	C	22	17	**	22
Coal Mine	24024	250	C	4	36	6	10
Cogswell Point	04156	10	C	0	0	**	0
Coop Creek	24025	477	C	20	59	15	35
Cottonwood Spring	24027	7,888	C	555	119	183	738
Cougar Canyon	24028	1,468	C	55	0	36	91
Cove (Alton)	24029	158	C	10	0	21	31
Cove (Circleville)	00810	12,662	C	231	0	9	240
Dog Valley	00812	9,704	C	336	280	*	336
Driveway	00011	860	C	20	0	18	38
Dry Lake	24033	1,796	C	74	46	94	168
Dry Wash	24034	1,977	C, H	206	0	80	286
Dump	24032	215	C	8	72	12	20
Eight Mile Gap	24035	571	C	15	10	27	42
Eight Mile Pass	05304	440	C	17	19	**	17

Allotments	Number	Federal Acres	Livestock Kind <sup>1</sup>	Active Livestock Permitted Use (AUMs)	Suspended Livestock Permitted Use (AUMs)	Wildlife Allocation (AUMs)	Total AUMs Allocated <sup>2</sup>
Elbow Springs	24037	2,352	C	50	134	77	127
Elephant Cove	24038	7,604	C	432	194	304	736
F.A.R.	24046	4,492	C	100	422	115	215
Farm Canyon	24040	3,262	C	243	0	122	365
Fish Tail	24042	3,039	C	230	58	87	317
Flume Hollow	24045	806	C	7	42	37	44
Gardner Hollow	24049	2,192	C	30	18	87	117
Glendale Bench	24051	1,735	C	130	0	170	300
Gordon Point	14098	329	C	40	30	47	87
Graveyard Hollow	25048	1,206	S	75	0	*	75
Harris Flat	24058	4,292	C	268	45	181	449
Hawkins Wash	15005	7,878	C	515	165	*	552
Hay Canyon	04155	709	C	50	50	60	110
Hillsdale	25035	1,483	C	140	0	*	140
Hogs Heaven	04154	1,404	C	50	490	136	186
Isolated Tracts	14062	1,028	C	65	16	89	154
John. R. Flat	24063	9,862	C	258	75	291	549
Johnson Spring	00012	618	C	96	0	**	15
Johnson Ranch	24066	5,118	C	265	335	110	375
Kanab Creek	24067	4,023	C	85	266	138	223
Kanab Creek Custodial	00005	65	C	9	39	***	9
Kane Springs	24068	15,271	C	253	651	457	710
Kinnikkinnic Spring	14069	5,031	C	90	410	167	257
Levanger Lakes	14070	872	C	33	0	43	76
Limekiln Creek	15029	3,773	C	70	0	*	70
Limestone Canyon	25047	1,535	C	67	0	*	67
Lost Spring	24074	1,028	C	4	0	15	19
Lower Herd	04101	820	C	25	140	61	86
Lower Hog Canyon	14075	2,486	C	52	116	33	85
Lower North Fork	04157	813	C	10	19	36	46
Lower Sink Valley	04112	2,441	C	35	238	***	35
Lydia	24077	2,083	C	58	158	171	229
Lydia's Canyon	24010	466	C	0	0	41	41
Marshall Canyon	25027	909	C	30	0	*	150
Meadow Canyon	24080	6,061	C	25	74	132	157

Allotments	Number	Federal Acres	Livestock Kind <sup>1</sup>	Active Livestock Permitted Use (AUMs)	Suspended Livestock Permitted Use (AUMs)	Wildlife Allocation (AUMs)	Total AUMs Allocated <sup>2</sup>
Mill Creek	00010	12,209	C	301	0	429	730
Muggins Flat	04162	638	C	12	56	13	25
Neuts Canyon	24087	2,419	C	112	62	237	349
North Fork	04160	366	C	15	1	14	29
Oak Springs	14088	2,797	C	87	231	121	208
Old Fort	14089	2,202	C	7	27	20	27
Orderville Gulch	24090	4,824	C	200	50	366	566
Pine Spring	24093	8,498	C	473	202	30	478
Poverty Flat	24094	9,603	C	416	0	400	816
Red Butte	24095	5,046	C	196	232	226	422
Red Canyon	14096	11,910	C	448	52	417	865
Red Hollow	14097	1,156	C	40	62	76	116
Red Knoll	04140	5,879	C	175	550	243	418
Robinson Creek	14099	524	C	24	61	37	61
Rock Canyon	25046	8,281	C	233	0	*	484
Rocking Chair	14100	1,572	C	91	138	175	236
Roller Mill	15030	1,883	C	184	0	*	184
Sagehen Hollow	25045	5,812	C	444	147	*	444
Sandy Creek	25052	8,461	C	688	0	*	688
Sanford Bench	25028	9,570	C	1,081	0	*	1,081
Sawmill	25049	539	C	30	0	*	30
Seeps	14107	2,199	C	30	422	281	311
Sethy's Canyon	04108	7,295	C	262	373	224	486
Sevier	15006	652	C	34	40	*	34
Sevier River	25036	2,308	C	340	0	*	340
Shearing Corral	00007	4,023	C	100	0	*	100
Sheep Spring	04142	3,474	C	223	279	111	334
South Canyon	25044	18,355	C	900	0	*	900
Spencer Bench	04113	7,023	C	97	129	160	257
Spring Hollow	04151	573	S	9	0	0	9
Spry	05007	8,528	C	449	302	*	449
Sugar Knoll	04117	2,686	C	112	0	48	160
Sunnyside	04118	410	C	14	0	14	28
Sunset Cliffs	04103	2,014	C	188	0	*	188
Syler Knoll	04122	442	C	6	104	16	22

Allotments	Number	Federal Acres	Livestock Kind <sup>1</sup>	Active Livestock Permitted Use (AUMs)	Suspended Livestock Permitted Use (AUMs)	Wildlife Allocation (AUMs)	Total AUMs Allocated <sup>2</sup>
Table Mountain	04104	2,296	S	89	247	181	270
Tebbs Hollow	25053	3,961	C	319	0	*	319
Thompson Point	04123	1,549	C	64	0	39	103
Three Mile Creek	25051	2,666	C	200	0	*	200
Toms Canyon	04164	240	C	5	0	***	5
Trail Canyon	04125	6,924	C	110	100	158	268
Trail Well	14126	1,329	C, H	88	0	16	104
Upper Hog	04128	4,183	C	100	183	98	198
Upper North Fork	04158	714	C	10	80	73	83
Upper Place	04129	1,581	C	23	29	69	92
Upper Sink Valley	04163	4,806	C	311	134	141	452
Virgin River	04131	3,922	C, H	230	0	122	352
Water Canyon	04132	3,398	C	48	0	51	99
Willis Canyon	04143	1,675	C	16	0	13	29
Yellowjacket	04137	7,378	C	241	998	315	556
Zion	04138	11,085	C	270	1167	519	789
Zion Park	04159	1,263	C	0	162	42	42
<b>TOTAL</b>		<b>434,713</b>	<b>-</b>	<b>17,987</b>	<b>13,479</b>	<b>11,045</b>	<b>29,424</b>

Notes:

<sup>1</sup> Livestock Kind Key: C = cattle; H = horse; S = sheep

<sup>2</sup> Total = Sum of "Active Livestock Permitted Use" and "Wildlife Allocation"

\* For allotments within the CBGA RMP, big game will be provided 1,220 AUMs of forage in the short term and up to 2,042 AUMs of forage in the long term. However, these AUMs are not allotment specific; they are allotted decision area wide.

\*\* Wildlife AUMs not allotted in these allotments.

\*\*\* Wildlife AUMs included only in the portion of the decision area administered by KFO.

Source: Kanab Field Office Grazing Files

## APPENDIX 15—RMP MONITORING PLAN

Resource	Suggested Monitoring Methodology
Air Quality	<p>Monitoring of air resource conditions for the purposes of evaluating BLM activities is done in accordance with the BLM Air Resource Management Monitoring Strategy (BLM, January 3, 2006). Air Quality Monitoring for regulatory compliance purposes is primarily conducted by Utah Department of Environmental Quality, Division of Air Quality (UDAQ) with oversight by the Environmental Protection Agency. The BLM Air Monitoring Strategy relies heavily on existing monitoring networks such as the Interagency Monitoring of Protected Visual Environments (IMPROVE) network, National Atmospheric Deposition Program (NADP), and Clean Air Status and Trends Network (CASTNET) and the UDAQ Air Monitoring Network. Smoke emissions related to wildland fire and prescribed fire are tracked and monitored according to the Utah Smoke Management Plan as revised:  <a href="http://gacc.nifc.gov/egbc/predictive/weather/smoke.htm">http://gacc.nifc.gov/egbc/predictive/weather/smoke.htm</a></p>
Soil Resources	<p>A sample of ground-disturbing projects with the potential to affect soil resources will be evaluated on a periodic basis to determine if best management practices or identified mitigation measures were followed and if they were effective. The number of allotments/acres that met the Upland and Riparian standards in the Utah Standards for Rangeland Health and the total number of allotments/acres assessed will also be reported in Rangeland, Inventory, Monitoring, and Evaluation report (RIME).</p>
Water Resources	<p>As noted in WAT-1 and WAT-2, the BLM will work with the State Division of Water Quality to monitor water quality. Review the water quality data from instream monitoring stations annually.</p> <p>In addition, use the rangeland health assessment process, particularly Standard 4 according to Interpreting Indicators of Rangeland Health, Rangeland Health Standards and Guidelines, and BLM Manual 4180 and Handbook H-4180-1. Water quality monitoring would be conducted at the established water quality sampling stations on a priority basis using indicators that are chosen in coordination with the State Division of Water Quality, Upper Sevier Watershed Committee, and Virgin River Management Plan Watershed Advisory Committee. Implement and monitor effectiveness of BMPs to protect the quality and beneficial uses of water at the project level. BMPs will be monitored and evaluated on implementation and effectiveness as part of the project or activity plan.</p> <p>Completion of the Water Source Inventory and maintenance of water rights data base would provide needed information to assert federal water rights, especially Public Water Reserves to protect federal investments and to ensure a reliable water supply for beneficial uses of public lands.</p>
Vegetation	<p>Measure trends in vegetative production, structure, and composition, soil/site stability, watershed function, and integrity of biotic community. Use the rangeland health assessment process prescribed in the most current versions of Interpreting Indicators of Rangeland Health, Rangeland Health Standards and Guidelines, and BLM Manual 4180 and Handbook H-4180-1 guiding implementation of the rangeland health standards. Determine level of PNC using the Rangeland Health Assessments (VEG-3).</p> <p>Conduct periodic measurements of plant composition, vigor, and productivity, as well as the amount and distribution of plant cover and</p>

Resource	Suggested Monitoring Methodology
	<p>litter. Monitoring of existing condition of vegetation would consist of identifying ecological sites, determining ecological status, determining soil types, vegetation mapping, baseline inventory, and assembling existing basic information.</p> <p>Monitor for seedling establishment, seedling and sapling survival, and understory herbaceous plant diversity. Monitor for effectiveness of treatments in rare plant communities that receive restoration treatments.</p> <p>As noted under VEG-8 and VEG-10, monitor riparian condition and functional status. Conduct Proper Functioning Condition (PFC) Assessment per TR 1737-9 and TR 1737-15 (assessment for streams) and TR 1737-11 and TR 1737-16 (assessments for lakes/wetlands) to assess the functionality of riparian and wetland areas.</p> <p>Conduct annual monitoring for new noxious weeds, concentrating in areas where ground disturbing activities have occurred, and where the public or agency personnel have reported sightings. Visit known noxious weed sites that are identified for treatment, and evaluate for effectiveness of control (annually). Monitor for both invasiveness and impacts. Monitor for new satellite populations of noxious weeds beyond existing noxious weed infestations/populations. For all known sites and any newly discovered sites, locate with a global positioning system (GPS) unit, photograph, measure, and determine the need for future treatment. Survey all burned areas (natural and prescribed) over 20 acres for noxious weeds.</p>
<p>Special Status Species (Threatened, Endangered, and Sensitive)</p>	<p>As noted in SSS-3, monitoring for listed and non-listed special status species and their habitats would be developed where land use and human disturbances have been identified as having potential for adverse impacts.</p> <p>According with conservation measures, agreements, and consultation efforts with the USFWS, monitoring listed species regularly.</p> <p>Long-term monitoring would be conducted using methods chosen in coordination with the USFWS and Utah Division of Wildlife Resources.</p> <p>Visual reconnaissance would be used to obtain general information on the habitats of special status plants. Individual federally listed species populations and habitats.</p> <p>Conduct monitoring jointly with Coral Pink Sand Dunes State Park for the Coral Pink Sand Dunes tiger beetle and the Welsh's milkweed.</p> <p>As noted in SSS-36, monitor stream habitat to detect changes every 5 to 10 years in streams with historic or currently occupied Bonneville cutthroat trout, roundtail chub, bluehead sucker, and flannelmouth sucker habitat, in cooperation with UDWR.</p>
<p>Fish and Wildlife</p>	<p>In conjunction with other federal and state agencies, continue to monitor wildlife populations in the planning area. Do this for individual species such as mule deer, elk, and pronghorn; and groups of species associated with source habitats such as sagebrush-steppe, pinyon-juniper, and mixed conifer forest. Periodically determine the adequacy of existing data (i.e. species, habitats, etc.) for supporting management decisions.</p>
<p>Wildland Fire Ecology</p>	<p>Monitoring will determine whether fire management strategies, practices, and activities are meeting resource management objectives and concerns. Fire management plans and policies will be updated as needed to keep current with national and state fire</p>

Resource	Suggested Monitoring Methodology
	<p>management direction. Scheduled program reviews (post-season fire review) will be conducted to evaluate fire management effectiveness in meeting goals and to re-assess program direction.</p> <p>Pre-fire condition and post-fire effects will be determined by monitoring vegetative response to treatments and progress towards meeting objectives. Monitoring methods may include fuels and vegetation transects, photo points, density, cover and frequency plots, and ocular estimates. As available, applicable remote sensing data will also be incorporated into ecological condition monitoring. The number of acres in Condition Class 1, 2, and 3 will be re-evaluated during the watershed assessment process, and tracked and reported in the Annual Program Summary and Planning Update.</p> <p>Wildfire rehabilitation effectiveness monitoring studies will be encouraged to determine whether emergency rehabilitation objectives are met. Monitoring requirements and methods will be project specific.</p>
Cultural Resources	<p>As noted in CUL-11, Establish a comprehensive monitoring program emphasizing:</p> <ul style="list-style-type: none"> <li>• Cultural sites that have been previously identified as being impacted (e.g., from vandalism, erosion, grazing, or other)</li> <li>• Cultural sites identified on maps, brochures, or other media that bring the site into public awareness</li> <li>• Sites that are known to be popular for public visitation (e.g., public use site)</li> <li>• A representative sample of sites known to be prone to impacts from predictable sources (e.g., vandalism, recreation, grazing, or development).</li> </ul> <p>As noted in CUL-6, update the Class I cultural resources inventory every 10 years.</p> <p>As noted in CUL-15, prioritize new field inventories (Class II or III) directed by NHPA Section 110 as follows:</p> <ul style="list-style-type: none"> <li>• Recreation areas identified for public use (i.e., OHV open areas)</li> <li>• 100 feet (30 meters) (depending on topography) on either side from the centerline of designated OHV routes</li> <li>• Areas of special cultural designation (ACECs, National Register sites, etc.) that have not been fully inventoried</li> <li>• Resources eligible for the NRHP at a national level of significance that have not been fully inventoried</li> <li>• Road systems—100 feet (30 meters) (depending on topography) on either side from the centerline of road</li> <li>• Areas lacking existing inventories (large areas with no inventory data)</li> <li>• 5-mile vulnerability zones surrounding cities and towns</li> <li>• Hiking/equestrian trails.</li> </ul> <p>A representative sample of significant cultural sites will be monitored at least annually, and a mitigation plan based on the results of the monitoring will be developed if necessary. Periodic ground patrols will be used year-round to reduce or prevent looting of cultural resource sites. Major sites will be periodically inspected to document any damage and identify future stabilization needs. Management plans will be developed for significant properties requiring protection or stabilization when identified. Assistance to institutions doing research or collection of specimens will be encouraged.</p> <p>Cultural resources will continue to be inventoried and evaluated as part of project level planning to achieve the objective of protecting</p>

Resource	Suggested Monitoring Methodology
	<p>significant properties from impact by proposed federally funded or authorized actions. This inventory and evaluation includes application of the National Register criteria to cultural properties and consultation with the State Historic Preservation Officer (SHPO), Tribal Governments, and Advisory Council on Historic Preservation, as appropriate per current regulations, policy, and the UT-BLM-SHPO Protocol Agreement.</p>
<p>Paleontological Resources</p>	<p>As noted in PAL-1, monitor the highest priority scientifically significant paleontological sites for trend and condition.</p> <p>As noted in PAL-5 and PAL-6, conduct non-Section 106 proactive inventories intermittently as resources allow. Prioritize paleontological resource inventories in the following areas (Map 31):</p> <ul style="list-style-type: none"> <li>• High resource potential</li> <li>• Medium resource potential</li> <li>• Low resource potential.</li> </ul> <p>As noted in PAL-9, monitor high-significance (scientific or interpretive) sites with fossil resources that are not feasible or desirable to excavate or collect when possible to document their condition. Frequency of monitoring action for identified sites would be determined by the physical nature of the resource and potential threats.</p> <p>The number of localities visited on an annual basis and their condition will be reported in the Annual Program Summary and Planning Update.</p>
<p>Visual Resources</p>	<p>Any project design features or mitigation measures identified to address visual resource management concerns will be monitored to ensure compliance with established VRM classes. Where appropriate, monitoring will include the use of the visual contrast rating system, described in BLM Manual 8400 during project review and upon project completion to assess the effectiveness of project design features and any mitigating measures.</p> <p>The number of areas/projects monitored for compliance with VRM objectives will be reported in the Annual Program Summary.</p>
<p>Non-WSA Lands with Wilderness Characteristics</p>	<p>Monitor impacts to the wilderness characteristics, focusing on areas with a higher potential for impacts, based on known visitor use patterns and area accessibility. Monitor impacts from OHV use annually. On a project-by-project basis, monitor potential and observed impacts to wilderness characteristics. Assess impacts to naturalness (e.g., rapid site inventory, review of naturalness based on inventory methods) and solitude (e.g., actual counts of visitors). Where funding and staffing allow, install and maintain traffic counters and/or motion-sensitive cameras at key sites to enhance data accuracy and assist in determining visitor use patterns.</p>
<p>Drought and Natural Disasters</p>	<p>During periods of prolonged drought or in areas that have experienced natural disasters, increase monitoring noted under the other resources, uses, and special designations to ensure that RMP goals and objectives are met during these periods of increased vulnerability.</p>
<p>Forestry and Woodland Products</p>	<p>Record accomplishments for providing wood products in the Timber Sale Information System (TSIS) database and MIS reporting.</p>

Resource	Suggested Monitoring Methodology
Livestock Grazing	<p>Use the rangeland health assessment process prescribed in the most current versions of Interpreting Indicators of Rangeland Health, Rangeland Health Standards and Guidelines, and BLM Manual 4180 and Handbook H-4180-1 guiding implementation of the rangeland health standards.</p> <p>The number of allotments/acres that meet the Standards for Rangeland Health and the total number of allotments/acres assessed will be reported in the Rangeland, Inventory, Monitoring, and Evaluation report (RIME).</p> <p>Assess Rangeland Health (qualitative) with an interdisciplinary team every 10 years or at the time of permit renewal. Report acres moving toward or away from meeting standards as part of meeting RMP objectives.</p> <p>Actual Use: Animal Unit Month (AUM) numbers reported 15 days after completing authorized grazing use on those allotments that qualify for actual use reporting. Forage consumed by livestock would be reported based on number of livestock and length of grazing use. Numbers could potentially be reduced when allotments are not meeting or progressing towards meeting standards due to livestock grazing.</p>
Recreation	<p>Monitoring of recreation resources will continue to occur throughout the planning area with emphasis placed on developed recreation sites and Special Recreation Management Areas. Monitoring will include regular patrols of these areas to check on signing, visitor use, recreation use-related impacts, and user conflicts. Additionally, monitoring will include identification and inspection of undeveloped areas where there may be problems with compliance with rules and regulations resulting in user conflicts and/or resource damage.</p> <p>Actual visitor and/or vehicle counts will be documented at all developed recreation sites and SRMAs as those sites and areas are visited. Monitoring will also use visitor surveys, traffic counters, and surveillance at developed recreation sites, documentation of user conflicts, and photo documentation of the changes in resource conditions over time. Monitoring may also include collection of data from visitor comments and complaints, or information request calls or emails. Monitoring data will be used to manage visitor use, develop plans and projects to reduce visitor impacts, and to provide appropriate facility or transportation system design.</p> <p>Special Recreation Permits (SRPs) issued to commercial operators or for competitive events will be monitored for compliance with permit terms, conditions and special stipulations, as well as administrative and post-use requirements. Field monitoring will focus on visitation levels and compliance with rules, regulations, and permit stipulations for specific sites, dispersed uses, and prescribed standards and guidelines.</p> <p>Average visitor use numbers for developed recreation sites and SRMAs will be reported in the BLM's Recreation Management Information System (RMIS) to track visitor use and recreation use trends over time. The number of recreation area management plans prepared and special recreation permits (SRPs) issued will also be reported annually in RMIS.</p>
Transportation	<p>Travel management and OHV use monitoring within the planning area will focus on compliance with specific route and area designations and restrictions, with primary emphasis on those routes or areas causing the highest levels of user conflicts or adverse impacts to resources. Various methods of monitoring may be employed including; aerial monitoring, ground patrol, "citizen watch,"</p>

Resource	Suggested Monitoring Methodology
	<p>and appropriate methods of remote surveillance such as traffic counters, etc.</p> <p>Evaluate trail impacts on natural resources through visual inspections, photo at problem areas (erosion, users short cutting, etc). Use trail traffic counters where appropriate to determine visitor use levels. Involve volunteers to assist in trail monitoring where appropriate and feasible.</p> <p>Periodically check that routes meet the objectives set forth in the RMP to ensure resource conditions such as water quality, wildlife/fish habitat, or recreational values are maintained and available to communities and users, and ensure resource values are not compromised.</p> <p>Route or area closures will be regularly monitored for compliance. Cooperation with other agencies in travel management and OHV use monitoring will continue to be emphasized, and improved wherever possible.</p>
Lands and Realty	<p>Land use authorizations will be monitored through periodic field examinations to ensure compliance with the terms and conditions of the authorizing document. On-the-ground monitoring will occur immediately upon issuance of the authorization and periodically throughout the life of the authorization. Records as to the status of the authorization are tracked through the BLM accomplishment tracking process (Legacy Rehost 2000 (LR-2000)). Management, realty personnel, and other key staff will periodically review status of authorizations and compliance.</p> <p>The number of use authorizations monitored annually and the number of those in compliance with terms and conditions of the authorization in any given fiscal year will be recorded in the Annual Program Summary and reported in LR-2000.</p> <p>Land ownership adjustment actions will be monitored through the BLM accomplishment tracking process. Management, realty personnel, and other key staff members in the Kanab Field Office will meet periodically to review program status and compliance with goals and objectives. Changes in land ownership affecting BLM lands or interests in lands will be recorded on the Utah State Office Geographic Information System Data Base, on Master Title Plates and on Surface and Minerals Status Maps in a timely manner. .</p> <p>The number of acres acquired and/or disposed of through land exchanges, acquisitions, sales, and Recreation and Public Purpose Act patents will be reported in LR-2000. .</p> <p>The effectiveness of existing right-of-way corridors and right-of-way use areas will be discussed during the periodic meetings of management, realty personnel and key KFO staff. The need for additional corridors and use areas will also be discussed during these meetings. Periodic on-the-ground inspections of the corridors and use areas will be conducted to ensure they are being managed correctly and that conflicting uses are not occurring which could preclude the use of these locations for their intended purpose.</p>
Minerals and Energy	<p>Any new mineral withdrawals from operation of the public land laws and/or mineral laws will be reported in the LR-2000 as will any withdrawal revocations. Withdrawals and revocation of withdrawals will be reported in LR-2000.</p> <p>Monitoring of mineral operations will be done to ensure compliance with applicable laws, regulations, conditions of leases/permits, and the requirements of approved exploration/development plans/applications. Monitoring activities will include:</p>

Resource	Suggested Monitoring Methodology
	<p>1. Periodic field inspections of leasable mineral activities. Inspections will be conducted to determine compliance with applicable laws, regulations, lease stipulations, and the requirements of approved exploration /development plans, applications for permit to drill, and sundry notices.</p> <p>2. Monitoring of oil and gas drilling/production activities in the decision area. Total gross surface disturbance and net surface disturbance from all drilling will be tracked.</p> <p>An accurate accounting of production will also be tracked on producing leases. Acres of new disturbance, acres re-claimed, and production numbers from producing leases will be reported in the Annual Program Summary.</p> <p>Monitoring of mining operations will be done to ensure compliance with 43 CFR 3809, 3802 and 3715 and other regulations and conditions of approval, specifically preventing "unnecessary or undue degradation". When applicable and practical, Plan and Notice review, inspections and associated compliance work will be coordinated with the Utah Division of Oil, Gas and Mining (DOG M).</p> <p>Field inspections will look for compliance with the Plans of Operation and Notices of Intent and include monitoring of weed control, reclamation of disturbed areas, revegetation and protection of the environment and public health and safety. Findings for each inspection will be documented. Any non-compliance items will be noted and the appropriate regulatory procedures followed.</p> <p>The number of explorations/operations monitored and the number in compliance will be reported in LR-2000 and CBS (Collection and Billing System).</p> <p>Monitoring of salable minerals will be done on a periodic basis to ensure compliance with applicable laws, regulations, BLM policy contained in BLM Manual Section 3600, Handbook H-3600- 1, and the requirements of the approved mining plan.</p> <p>Inspections will specifically note production verification compliance with reclamation, weed control and the protection of the environment and public health and safety. Operations in sensitive environmental areas or operations with a high potential for greater than usual impacts will be inspected more often. Identification and resolution of salable mineral trespasses will also be performed.</p> <p>The number of mineral material sites monitored will be reported in LR-2000 and CBS.</p>
<p>Areas of Critical Environmental Concern</p>	<p>The Cottonwood Canyon ACEC will have a management plan prepared that will include a monitoring component. Specific monitoring methods will be identified in the ACEC plan, but techniques could include photo points, line intercept transects, ocular surveillance, study plots, or value points. A mitigation plan will be developed based on the results of the monitoring, if necessary.</p> <p>The long term monitoring program will include the visitation of a representative sample of various relevant and important values within the designated ACEC, as well to establish baseline information on the current condition of these values. Once the baseline condition assessment information has been compiled, the ACEC will be monitored at least once every four years to identify any potential adverse impacts that might occur and identify trends in resource condition and/or deterioration, and to determine whether any actions taking place in the area are causing detrimental changes to the values deemed relevant and important. Any changes will be noted and recorded in the cultural resource data base and reported to the Field Manager.</p>

Resource	Suggested Monitoring Methodology
Wild and Scenic Rivers	Conduct monitoring, including periodic patrols to check boundaries, signing, and visitor use to ensure that outstandingly remarkable values are not compromised on the suitable WSR segments. Inspect planned projects as well as on-the-ground projects for compliance to maintain WSR integrity. Monitor the upper and lower boundaries of each WSR at a minimum of once per year, document with photos at permanent locations at the on-stream boundaries. Every other year inspect random segments of the interior of each WSR for compliance to maintain WSR integrity.
Wilderness	The Paria Canyon-Vermilion Cliffs Wilderness Area will be monitored in accordance with the direction provided in the Wilderness Management Plan, 1986, unless direction is updated. Any new areas that may be designated wilderness by Congress over the life of the plan would be monitored in accordance with guidance developed in their respective wilderness management plans.
Wilderness Study Areas	Wilderness Study Areas will be monitored in accordance with direction provided in the Interim Management Policy for Lands Under Wilderness Review (BLM Handbook H-8550-1), Chapter 2 section D. The policy requires monitoring of all WSAs at least once per month during the months the area is accessible by the public. Suitable monitoring methods will include both aerial and ground surveillance. As allowed by the IMP, alternative monitoring schedules may be prepared and implemented if approved by the State Director.
Other Designations	Following development of the comprehensive management plan for the National Historic Trail (OD-2), the prepared Activity Trail Plan (OD-3) will include monitoring for the segments within the Kanab Field Office. Monitoring should include inspection of planned projects as well as on-the-ground projects for compliance to maintain remaining trail integrity. Assure that the VRM objectives for public lands seen along the trail are met.  Monitor any interpretive signs installed along the Old Spanish National Historic Trail for wear or vandalism.

## APPENDIX 16. STANDARDS AND GUIDES FOR GRAZING MANAGEMENT

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The BLM has developed the following Fundamentals of Rangeland Health and their companion rules-Standards for Rangeland Health and Guidelines for Grazing Management for BLM in Utah ([BLM-UT-GI-97-001-4000] U.S. Department of Interior, Bureau of Land Management, Utah State Office 1997).

### D.1. FUNDAMENTALS OF RANGELAND HEALTH

As provided by regulations, developed by the Secretary of the Interior on February 22, 1995, the following conditions must exist on BLM lands:

1. Watersheds are in, or making significant progress toward, properly functioning physical condition, including their upland, riparian –wetland, and aquatic components; soil and plant conditions support infiltration, soil moisture storage, and the release of water that are in balance with climate and landform and maintain or improve water quality, and timing and duration of flow.
2. Ecological processes, including the hydrologic cycle nutrient cycle, and energy flow, are maintained, or there is significant progress toward their attainment, in order to support healthy biotic populations and communities.
3. Water quality complies with State water quality standards and achieves, or is making significant progress towards achieving established BLM management objectives such as meeting wildlife needs.
4. Habitats; are, or are making significant progress toward being, restored or maintained for Federal threatened and endangered Species, Federal proposed, Category 1 and 2 Federal candidate and other special status Species.

In 1997, the BLM in Utah developed rules to carry out the Fundamentals of Rangeland health. These are called Standards for Rangeland health and Guidelines for grazing management.

**Standards** spell out conditions to be achieved on BLM Lands in Utah, and **Guidelines** describe practices that will be applied in order to achieve the Standards.d.2. Standards for Rangeland Health

#### **STANDARD 1. UPLAND SOILS EXHIBIT PERMEABILITY AND INFILTRATION RATES THAT SUSTAIN OR IMPROVE SITE PRODUCTIVITY, CONSIDERING THE SOIL TYPE, CLIMATE, AND LANDFORM.**

As indicated by:

1. Sufficient cover and litter to protect the soil surface from excessive water and
2. wind erosion, promote infiltration, detain surface flow, and retard soil moisture loss by evaporation.
3. The absence of indicators of excessive erosion such as rills, soil pedestals. and actively eroding gullies.

4. The appropriate amount, type, and distribution Of vegetation reflecting the presence of (1) the Desired Plant Community IDPCI, where identified in a land use plan, or (2) where the PVC is not identified, a community that equally sustains the desired level of productivity and properly functioning ecological conditions.

**STANDARD 2. RIPARIAN AND WETLAND AREAS ARE IN PROPERLY FUNCTIONING CONDITION.  
STREAM CHANNEL MORPHOLOGY AND FUNCTIONS ARE APPROPRIATE TO SOIL TYPE,  
CLIMATE AND LANDFORM.**

As indicated by:

1. Stream bank vegetation consisting of or showing a trend toward species with root masses capable of withstanding high stream flow events. Vegetative cover adequate to protect stream banks and dissipate stream flow energy associated with high-water flows. protect against accelerated erosion. capture sediment. and provide for groundwater recharge.
2. Vegetation reflecting: Desired Plant Community. maintenance of riparian and wetland soil moisture characteristics, diverse age structure and composition. high vigor. large woody debris when site potential allows. and providing food. cover and other habitat needs for dependent animal species.
3. Revegetating point bars: lateral stream movement associated with natural sinuosity: channel width. depth, pool frequency and roughness appropriate to landscape position.
4. Active floodplain.

**STANDARD 3. DESIRED SPECIES, INCLUDING NATIVE, THREATENED.**

As indicated by:

1. Frequency, diversity, density, age classes, and productivity of desired native species necessary to ensure reproductive capability and survival.
2. Habitats connected at a level to enhance species survival.
3. Native species reoccupy habitat niches and voids caused by disturbances unless management objectives call for introduction or maintenance of nonnative species.
4. Appropriate amount, type, and distribution of vegetation reflecting the presence of (1) the Desired Plant Community DPC, where identified in a land use plan conforming to these Standards, or (2) where the DPC is identified a community that equally sustains the desired level of productivity and properly functioning ecologic processes.

**STANDARD 4. BLM WILL APPLY AND COMPLY WITH WATER QUALITY STANDARDS  
ESTABLISHED BY THE STATE OF UTAH (R.317-2) AND THE FEDERAL CLEAN WATER  
AND SAFE DRINKING WATER ACTS. ACTIVITIES ON BLM LANDS WILL FULLY SUPPORT  
THE DESIGNATED BENEFICIAL USES DESCRIBED IN THE UTAH WATER QUALITY  
STANDARDS {R.317-2} FOR SURFACE AND GROUNDWATER. 1**

As indicated by:

1. Measurement of nutrient loads, total dissolved solids, chemical constituents, fecal coliform, water temperature and other water quality parameters.
2. Macro-invertebrate communities that indicate water quality meets aquatic objectives.

Because BLM Lands provide forage for grazing of wildlife, wild horses and burros, and domestic livestock, the following rules have been developed to assure that such grazing is consistent with the Standards listed here.

1. BLM will continue to coordinate monitoring water quality activities with other Federal, State and technical agencies.

### **D.3. GUIDELINES FOR GRAZING MANAGEMENT**

1. Grazing management practices will be implemented that:
  - a. Maintain sufficient residual vegetation and litter on both upland and riparian sites to protect the soil from wind and water erosion and support ecological functions;
  - b. Promote attainment or maintenance of proper functioning condition riparian/wetland areas, appropriate stream channel morphology, desired soil permeability and permeability and infiltration, and appropriate soil conditions and kinds and amounts of plants and animals to support the hydrologic cycle, nutrient cycle, and energy flow.
  - c. Meet the physiological requirements of desired plants and facilitate reproduction and maintenance of desired plants to the extent natural conditions allow;
  - d. Maintain viable and diverse populations of plants and animals appropriate for the site,
  - e. Provide or improve within the limits of site potentials, habitat for Threatened or Endangered Species;
  - f. Avoid grazing management conflicts with other species that have the potential of becoming protected or special status species;
  - g. Encourage innovation, experimentation and the ultimate development of alternatives to improve rangeland management practices;
  - h. Give priority to rangeland improvement projects and land treatments that offer the best opportunity for achieving the Standards.
2. Any spring or seep developments will be designed and constructed to protect ecological process and functions and improve livestock, wild horse and wildlife distribution.
3. New rangeland projects for grazing will be constructed in a manner consistent with the Standards. Considering economic circumstances and site limitations, existing rangeland projects and facilities that conflict with the achievement or maintenance of the Standards will be relocated and/or modified.
4. Livestock salt blocks and other nutritional supplements will be located away from riparian/wetland areas or other permanently located, or other natural water sources. It is recommended that the locations of these supplements be moved every year.
5. The use and perpetuation of native species will be emphasized. However, when restoring or rehabilitating disturbed or degraded rangelands nonintrusive, nonnative plant species are appropriate for use where native species (a) are not available, (b) are not economically feasible, (c) can not achieve ecological objectives as well as nonnative species, and/or (d) cannot compete with already established native species
6. When rangeland manipulations are necessary, the best management practices, including biological processes, fire and intensive grazing, will be utilized prior to the use of chemical or mechanical manipulations.

7. When establishing grazing practices and rangeland improvements, the quality of the outdoor recreation experience is to be considered. Aesthetic and scenic values, water, campsites and opportunities for solitude are among those considerations.
8. Feeding of hay and other harvested forage (which does not refer to miscellaneous salt, protein, and other supplements) for the purpose of substituting for inadequate natural forage will not be conducted on BLM lands other than in (a) emergency situations where no other resource exists and animal survival is in jeopardy, or (b) situations where the Authorized Officer determines such a practice will assist in meeting a Standard or attaining a management objective.
9. In order to eliminate, minimize, or limit the spread of noxious weeds, (a) only hay cubes, hay pellets, or certified weed-free hay will be fed on BLM lands, and (b) reasonable adjustments in grazing methods, methods of transport, and animal husbandry practices will be applied.
10. To avoid contamination of water sources and in advertent damage to non-target species, aerial application of pesticides will not be allowed within 100 feet of a riparian wetland area unless the product is registered for such use by the EPA.
11. On rangelands where a standard is not being met, and conditions are moving toward meeting the standard, grazing may be allowed to continue. On lands where a standard is not being met, conditions are not improving toward meeting the standard or other management objectives, and livestock grazing is deemed responsible, administrative action with regard to livestock will be taken by the Authorized Officer pursuant to CUR 4180.2(c).
12. Where it can be determined that more than one kind of grazing animal is responsible for failure to achieve a Standard, and adjustments in management are required, those adjustments will be made to each kind of animal, based on interagency cooperation as needed, in proportion to their degree of responsibility.
13. Rangelands that have been burned, reseeded or otherwise treated to alter vegetative composition will be closed to livestock grazing as follows: (1) burned rangelands, whether by wildfire or prescribed burning, will be ungrazed for a minimum of one complete growing season following the burn; and (2) rangelands that have been reseeded or otherwise chemically or mechanically treated will be ungrazed for a minimum of two complete growing seasons.
14. Conversions in kind of livestock (such as from sheep to cattle) will be analyzed in light of Rangeland Health Standards. Where such conversions are not adverse to achieving a Standard, or they are not in conflict with BLM land use plans, the conversion will be allowed.

# APPENDIX 17.

## HYDRAULIC CONSIDERATIONS FOR PIPELINES CROSSING STREAM CHANNELS; TECHNICAL NOTE 423

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### Suggested citations:

Fogg, J. and H. Hadley. 2007. Hydraulic considerations for pipelines crossing stream channels. Technical Note 423. BLM/ST/ST-07/007+2880. U.S. Department of the Interior, Bureau of Land Management, National Science and Technology Center, Denver, CO. 18 pp. <http://www.blm.gov/nstc/library/techno2.htm>.

U.S. Department of the Interior. 2007. Hydraulic considerations for pipelines crossing stream channels. Technical Note 423. BLM/ST/ST-07/007+2880. Bureau of Land Management, National Science and Technology Center, Denver, CO. 18 pp. <http://www.blm.gov/nstc/library/techno2.htm>.

### ABSTRACT

High flow events have the potential to damage pipelines that cross stream channels, possibly contaminating runoff. A hydrologic analysis conducted during the design of the pipeline can help determine proper placement. Flood frequency and magnitude evaluations are required for pipelines that cross at the surface. There are several methods that can be used, including reconnaissance, physiographic, analytical, and detailed methods. The method used must be appropriate for the site's characteristics and the objectives of the analysis. Channel degradation and scour evaluations are required for pipelines crossing below the surface. Proper analysis and design can prevent future pipeline damage and reduce repair and replacement costs.

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## INTRODUCTION

In 2002, the U.S. Fish and Wildlife Service raised concerns about the potential for flash floods in ephemeral stream channels to rupture natural-gas pipelines and carry toxic condensates to the Green River, which would have deleterious effects on numerous special-status fish species (Figure 1). In November of the same year, BLM hydrologists visited the Uinta Basin in Utah to survey stream channels and compute flood magnitudes and depths to better understand possible flooding scenarios. From this they developed construction guidance for pipelines crossing streams in Utah. This guidance was later modified so that it was generally applicable to the arid and semiarid lands of the intermountain west. It may also have general applicability in other areas of the western United States. The purpose of this document is to present the modified guidance for placement of pipelines crossing above or below the surface of stream channels to prevent inundation or exposure of the pipe to the hydraulic forces of flood events.



**Figure 1. Pipeline breaks during flooding can release condensate toxic to sensitive fish species.**

## SURFACE CROSSINGS

Pipelines that cross stream channels on the surface should be located above all possible floodflows that may occur at the site. At a minimum, pipelines must be located above the 100-year flood elevation and preferably above the 500-year flood elevation. Two sets of relationships are available for estimating flood frequencies at ungaged sites in Utah. Thomas and Lindskov (1983) use drainage basin area and mean basin elevation for flood estimates for six Utah regions stratified by location and basin elevation (Table 1). Thomas et al. (1997) also use drainage area and mean basin elevation to estimate magnitude and frequency of floods throughout the southwestern U.S., including seven regions that cover the entire State of Utah. Results from both sets of equations should be examined to estimate the 100- and 500-year floods, since either of the relations may provide questionable results if the pipeline crosses a stream near the boundary of a flood region or if the drainage area or mean basin elevation for the crossing exceed the limits of the data set used to develop the equations.

**Table 1. Examples of Flood Frequency Equations for Ungaged Sites in Utah**

<b>Regression equations for peak discharges for Uinta Basin (from Thomas and Lindskov 1983)</b>			
<b>Discharge Q in cubic feet per second, Area in square miles, Elevation in thousands of feet</b>			
<b>Recurrence interval (yrs)</b>	<b>Equation</b>	<b>Number of stations used in analysis</b>	<b>Average standard error of estimate (%)</b>
2	$Q = 1,500 A^{0.403} E^{-1.90}$	25	82
5	$Q = 143,000 A^{0.374} E^{-3.66}$	25	66
10	$Q = 1.28 \times 10^6 A^{0.362} E^{-4.50}$	25	64
25	$Q = 1.16 \times 10^7 A^{0.352} E^{-5.32}$	25	66
50	$Q = 4.47 \times 10^7 A^{0.347} E^{-5.85}$	25	70
100	$Q = 1.45 \times 10^8 A^{0.343} E^{-6.29}$	25	74

Procedures for estimating 100-year and 500-year flood magnitudes for other States are described in the U.S. Geological Survey's National Flood Frequency Program (Ries and Crouse 2002) (Figure 2). Full documentation of the equations and information necessary to solve them is provided in individual reports for each State. The National Flood Frequency (NFF) Website (<http://water.usgs.gov/software/nff.html>) provides State summaries of the equations in NFF, links to online reports for many States, and factsheets summarizing reports for States with new or corrected equations. Background information in each State's flood frequency reports should be checked to ensure that application of the equations is not attempted for sites with independent variables outside the range used to develop the predictive equations.

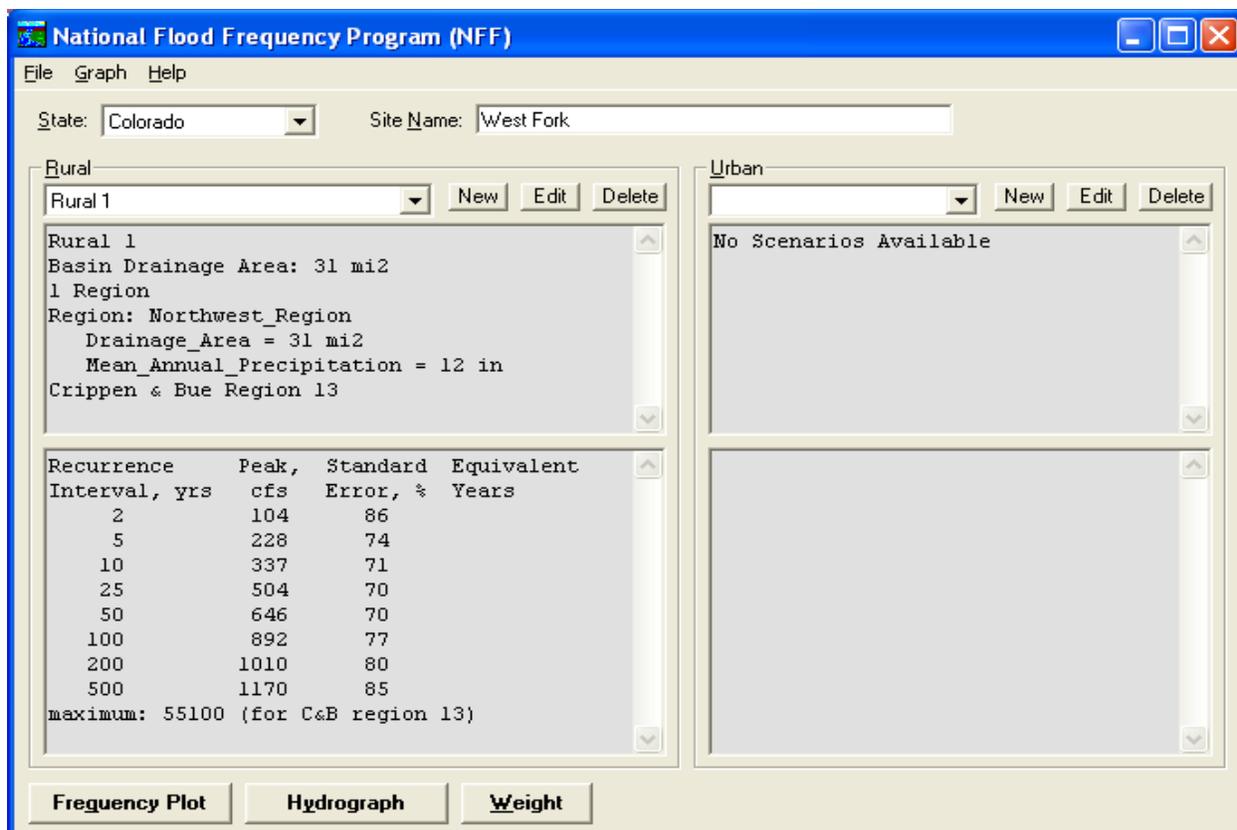


Figure 2. View of the output from NFF.

Once the flood frequency for a site has been estimated, determining the depth of flow associated with an extreme flood (i.e., the elevation of the pipeline at the crossing) may be approached in a number of ways. Procedures for estimating depth of flow for extreme floods in Utah are presented in Thomas and Lindskov (1983). Similar procedures presented in Burkham (1977, 1988) are generally applicable for locations throughout the Great Basin and elsewhere. The reconnaissance, physiographic, analytical, and detailed methods described in those reports will be summarized briefly in this paper. Burkham (1988) describes an additional method (historical method) not presented here, since the data for its use (high-water marks for an extreme historical flood with known discharge and recurrence interval) are rarely available in public land situations for which this guidance is intended.

### **RECONNAISSANCE METHOD**

The reconnaissance method (as the name implies) is a fairly rough and imprecise method for delineating flood-prone areas (Burkham 1988; Thomas and Lindskov 1983). It is most applicable to stable or degrading alluvial channels with multiple terrace surfaces, although such terraces may be difficult to detect on severely degrading streams. In this procedure, the channel of interest is examined to approximate the area that would be inundated by a large flood. A geomorphic reconnaissance of the site is conducted, and it may be supplemented with aerial photos, maps, and historical information available for the reach of interest. In addition to the morphology of the channel, floodplain, and terraces, information on vegetation (e.g., species,

flood tolerance, drought tolerance) and soils (e.g., development, stratification, and drainage) can be helpful for identifying flood-prone areas (Burkham 1988). For best results, the geomorphic analysis should include reaches upstream and downstream of the site and should attempt to determine the general state of the stream channel as aggrading, degrading, or stable. (Additional guidance on detection of stream degradation is presented in the section on subsurface crossings).

In the reconnaissance method, identification of bankfull elevation and the active floodplain (i.e., floodplain formed by the present flow regime) provides **inadequate** conveyance for extreme flood events (Figure 3). Past floodplains or present terraces also must be identified, since these surfaces may be inundated by extreme floods in the present flow regime, especially in arid and semiarid environments. Pipelines should be constructed so that they cross at or above the elevation of the highest and outermost terrace (Figure 4). The highest terrace is unlikely to be accessed in the modern flow regime by any but the most extreme floods.

Practitioners of the reconnaissance method need considerable experience in geomorphology, sedimentation, hydraulics, soil science, and botany. Also, since this method is based on a geomorphic reconnaissance of the site, no flood frequency analysis is required and no recurrence interval can be assigned to the design elevation. An additional drawback to the method is that the accuracy of the results is unknown. However, the reconnaissance method may be the most rational one for delineating flood-prone areas on some alluvial fans and valley floors where channels become discontinuous (Burkham 1988). While this is the quickest approach to designing a pipeline that crosses a channel, it likely will result in the most conservative estimate (i.e., highest elevation and greatest construction cost) for suspension of the pipeline.



**Figure 3. Although this pipeline crossed above the bankfull channel indicators, it was not high enough to escape more extreme floods.**



**Figure 4. This New Mexico pipeline crosses the channel near the elevation of the highest terrace, which places it above even the most extreme flood events.**

### ***PHYSIOGRAPHIC METHOD***

A slightly more intensive approach to designing pipelines that cross streams is based on the physiographic method for estimating flood depths at ungaged sites described by Thomas and Lindskov (1983) and Burkham (1988). The procedure uses regional regression equations (similar to the flood frequency equations described above) to estimate **maximum** depth of flow associated with a specified recurrence-interval flood (Table 2). Flood depth is then added to a longitudinal survey of the channel **thalweg** in the vicinity of the crossing (10 to 20 channel widths in length), resulting in a longitudinal profile of the specified flood. Elevation of the flood profile at the point of pipeline crossing is the elevation above which the pipeline must be suspended. The method is generally applicable where 1) the project site is physiographically similar to the drainage basins used to develop the regression equations and 2) soil characteristics are the same at the project site as in the basins where the regression equations were developed. While this procedure requires a field survey and calculation of flood depths at points along the channel, it may result in a lower crossing elevation (and possibly lower costs) for the pipeline. Also, since the regional regression equations estimate flood depths for specific recurrence-interval floods, it is possible to place a recurrence interval on the crossing design for risk calculations. However, regional regression equations linking depth of flood to recurrence interval have not been developed for many areas. In States where they have been developed (e.g., Alabama, Colorado, Illinois, Kansas, and Oklahoma), standard errors of the estimates have ranged from 17 to 28 percent, with an average standard error of 23 percent (Burkham 1988).

**Table 2. Examples of Depth Frequency Equations for Ungaged Sites in Utah**

Regression equations for flood depths for Uinta Basin (from Thomas and Lindskov 1983)			
Flood depth <u>D</u> in feet, <u>A</u> rea in square miles, <u>E</u> levation in thousands of feet			
Recurrence interval (yrs)	Equation	Number of stations used in analysis	Average standard error of estimate (%)
2	$D = 1.03 A^{0.159}$	16	30
5	$D = 13.3 A^{0.148} E^{-1.03}$	16	28
10	$D = 68.6 A^{0.131} E^{-1.69}$	16	26
25	$D = 556 A^{0.128} E^{-2.59}$	16	24
50	$D = 1330 A^{0.123} E^{-2.95}$	15	24
100	$D = 1210 A^{0.130} E^{-2.86}$	14	22

**ANALYTICAL METHOD**

The analytical method described by Burkham (1988) uses uniform flow equations to estimate depth of flow associated with a particular magnitude and frequency of discharge. Typically, a trial-and-error procedure is used to solve the Manning uniform flow equation for depth of flow, given a design discharge (i.e., a flood of specified recurrence interval), a field-surveyed cross section and channel slope, and an estimate of the Manning roughness coefficient (*n*). Numerous software packages are available to facilitate the trial-and-error solution procedure (e.g., WinXSPRO). Since the Manning formula is linear with respect to the roughness coefficient, estimating this coefficient can be a significant source of error and is likely the most significant weakness in this approach. Estimating roughness coefficients (*n* values) for ungaged sites is a matter of engineering judgment, but *n* values typically are a function of slope, depth of flow, bed-material particle size, and bedforms present during the passage of the flood wave. Guidance is available in many hydraulic references (e.g., Chow 1959). Selecting *n* values for flows above the bankfull stage is particularly difficult, since vegetation plays a major role in determining resistance to flow. Barnes (1967) presents photographic examples of field-verified *n* values, and Arcement and Schneider (1989) present comprehensive guidance for calculating *n* values for both channels and vegetated overbank areas (i.e., floodplains). Depth of flow determined with uniform flow equations, such as the Manning equation, represents **mean** depth of flow to be added to the **cross section** at the site of the pipeline crossing.

Burkham (1977, 1988) also presented a simplified technique for estimating depth of flow, making use of the general equation for the depth-discharge relation:

$$d = C Q^f$$

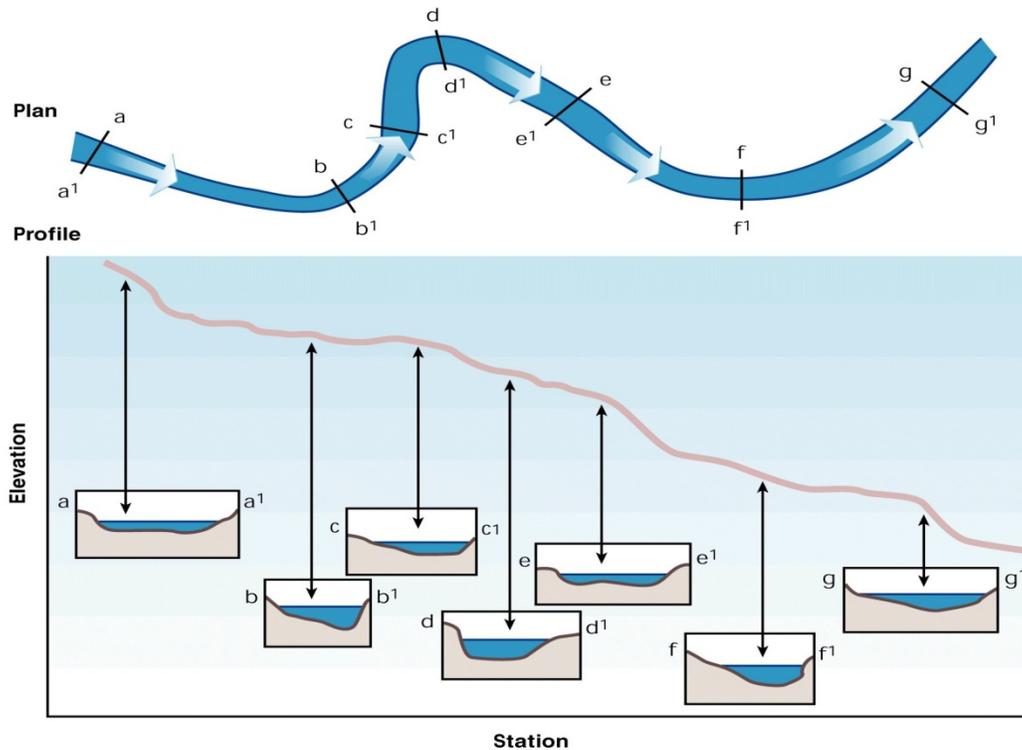
Values of *f* (the slope of the relationship when plotted on logarithmic graph paper) can be determined from "at-station" hydraulic geometry relationships at gaging stations in the region. Only the upper portion of the gaging-station ratings should be used to derive the slope (*f* value) for application to extreme floods, since a substantial portion of the flow may be conveyed in the overbank area. Alternatively, Burkham (1977, 1988) presents a simplified procedure for estimating *f* that requires only a factor for channel shape. Leopold and Langbein (1962)

computed a theoretical value of 0.42 for natural channels, while Burkham (1988) computed a theoretical value of 0.46 for parabolic cross sections. Burkham (1977) earlier reported an average  $f$  value of 0.42 from 539 gaging stations scattered along the eastern seaboard and upper Midwest, while Leopold and Maddock (1953) reported an average  $f$  value of 0.40 for 20 river cross sections in the Great Plains and the Southwest. Park (1977) summarized  $f$  values from 139 sites around the world and found most values occurred in the range of 0.3 to 0.4. Additional assumptions in Burkham (1977, 1988) enable an estimate of the coefficient  $C$  in the depth-discharge relationship with only a single field measurement of width and maximum depth at some reference level in the channel (e.g., bankfull stage) (Burkham 1977, 1988). Depth of flow determined from Burkham's simplified technique represents **maximum** depth of flow to be added to the **thalweg** at the cross section.

The analytical methods described by Burkham (1977, 1988) generally will be more accurate than the physiographic and reconnaissance methods described previously; thus, they may result in lower pipeline elevations and construction costs than the previous methods. However, analysis of flood elevations for the most sensitive situations should probably be conducted with the detailed method described below.

### **DETAILED METHOD**

Additional savings in construction costs for pipelines crossing channels may be realized by applying a detailed water-surface-profile model of flow through the crossing site. The water-surface-profile model requires a detailed survey of both the longitudinal channel profile (at least 20 channel widths in length) and several cross sections along the stream (Figure 5). Design flows (e.g., 100-year and 500-year floods) are calculated for the channel at the crossing with the regional regression equations described above and routed through the surveyed channel reach using a step-backwater analysis. The step-backwater analysis uses the principles of conservation of mass and conservation of energy to calculate water-surface elevations at each surveyed cross section. Computed water-surface elevations at successive cross sections are linked to provide a water-surface profile for the flood of interest through the reach of interest. The computations are routinely accomplished in standard software, such as the U.S. Army Corps of Engineers' HEC-RAS model. Whereas the analytical methods described previously assume steady, uniform flow conditions through the reach, a detailed water-surface-profile model is capable of handling both gradually and (to some extent) rapidly varied flow conditions. Since the computation uses a detailed channel survey, it is the most accurate method to use; however, it is likely the most expensive method for the same reason. Burkham (1988) indicates that the error in flood depths predicted from step-backwater analysis can be expected to be less than 20 percent. The step-backwater computations require an estimate of the Manning roughness coefficient ( $n$ ) as an indicator of resistance to flow and assume fairly stable channel boundaries. Estimation of the roughness coefficient ( $n$ ) includes the same considerations discussed previously for the analytical methods. The assumption of fairly stable channel boundaries is not always met with sand-bed channels and is an issue of considerable importance for designing subsurface pipeline crossings as well.



**Figure 5. Application of a water-surface-profile model requires both a longitudinal channel profile and several surveyed cross sections (Federal Interagency Stream Restoration Working Group 1998).**

Of the methods presented for determining elevation of floods for pipelines crossing channels, the detailed method is the most accurate and should be used for situations with high resource values, infrastructure investment, construction costs, or liabilities in downstream areas. In undeveloped areas, the physiographic and analytical methods may be used to provide quick estimates of flood elevations for sites with fewer downstream concerns. The reconnaissance method provides the roughest estimates but may be all that is warranted in very unstable areas, such as alluvial fans or low relief valley floors (e.g., near playas). The detailed, analytical, and physiographic methods all assume relatively stable channel boundaries but may be used on sand channels with an accompanying loss of accuracy. In very sandy channels, the accuracy of results from the detailed method may not be significantly better than the results from one of the intermediate methods unless a mobile-boundary model is used (Burkham 1988).

### **SUBSURFACE (BURIED) CROSSINGS**

Since many of the pipelines are small and most of the channels are ephemeral, it is commonplace to bury the pipelines rather than suspending them above the streams. The practice of burying pipelines at channel crossings likely is both cheaper and easier than suspending them above all floodflows; however, an analysis of channel degradation and scour should be completed to ensure the pipelines are not exposed and broken during extreme runoff events (Figure 6). Without such an analysis, channels should be excavated to bedrock and pipelines placed beneath all alluvial material.



**Figure 6. Channel degradation or scour during flash-flood events may expose buried pipelines, resulting in costly breaks.**

Buried pipelines may be exposed by streambed lowering resulting from channel degradation, channel scour, or a combination of the two. Channel degradation occurs over a long stream reach or even the entire drainage network and is generally associated with the overall lowering of the landscape. Degradation also may be associated with changes in upstream watershed or channel conditions that alter the water and sediment yield of the basin. Channel scour is a local phenomenon associated with passage of one or more flood events or site-specific hydraulic conditions that may be natural or human-caused in origin. Either process can expose buried pipelines to excessive forces associated with extreme flow events, and an analysis of each is required to ensure integrity of the crossing.

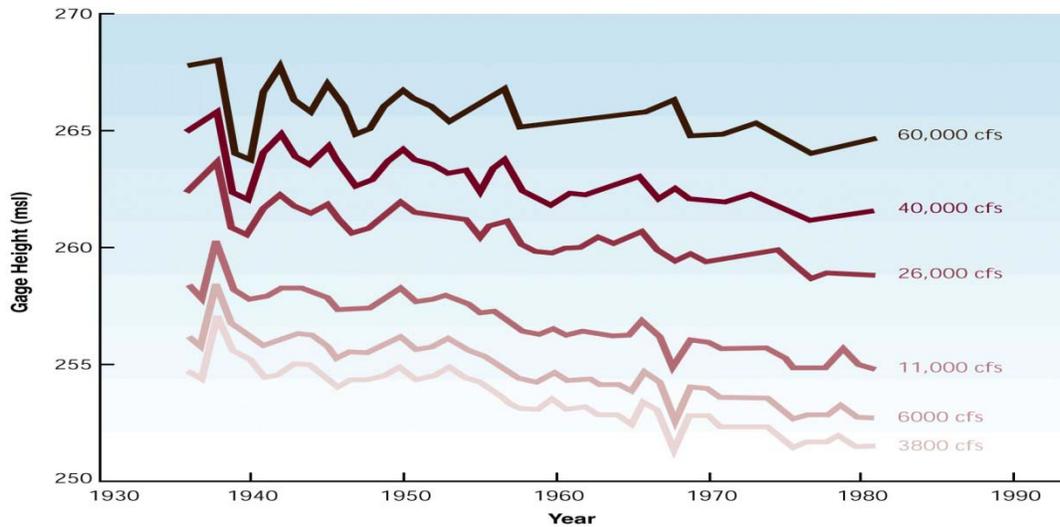
### ***CHANNEL DEGRADATION***

Detection of long-term channel degradation must be attempted, even if there is no indication of local scour. Conceptual models of channel evolution (e.g., Simon 1989) have been proposed to describe a more-or-less predictable sequence of channel changes that a stream undergoes in response to disturbance in the channel or the watershed. Many of these models are based on a "space for time" substitution, whereby downstream conditions are interpreted as preceding (in time) the immediate location of interest, and upstream conditions are interpreted as following (in time) the immediate location of interest. Thus, a reach in the middle of the watershed that previously looked like the channel upstream will evolve to look like the channel downstream

(Federal Interagency Stream Restoration Working Group 1998). Since channel evolution models can help predict current trends where a pipeline crosses a channel, they may indicate areas to be avoided when relocation of the crossing is an option. Most conceptual models of channel evolution have been developed for landscapes dominated by streams with cohesive banks; however, the same processes occur in streams with noncohesive banks, with somewhat less well-defined stages.

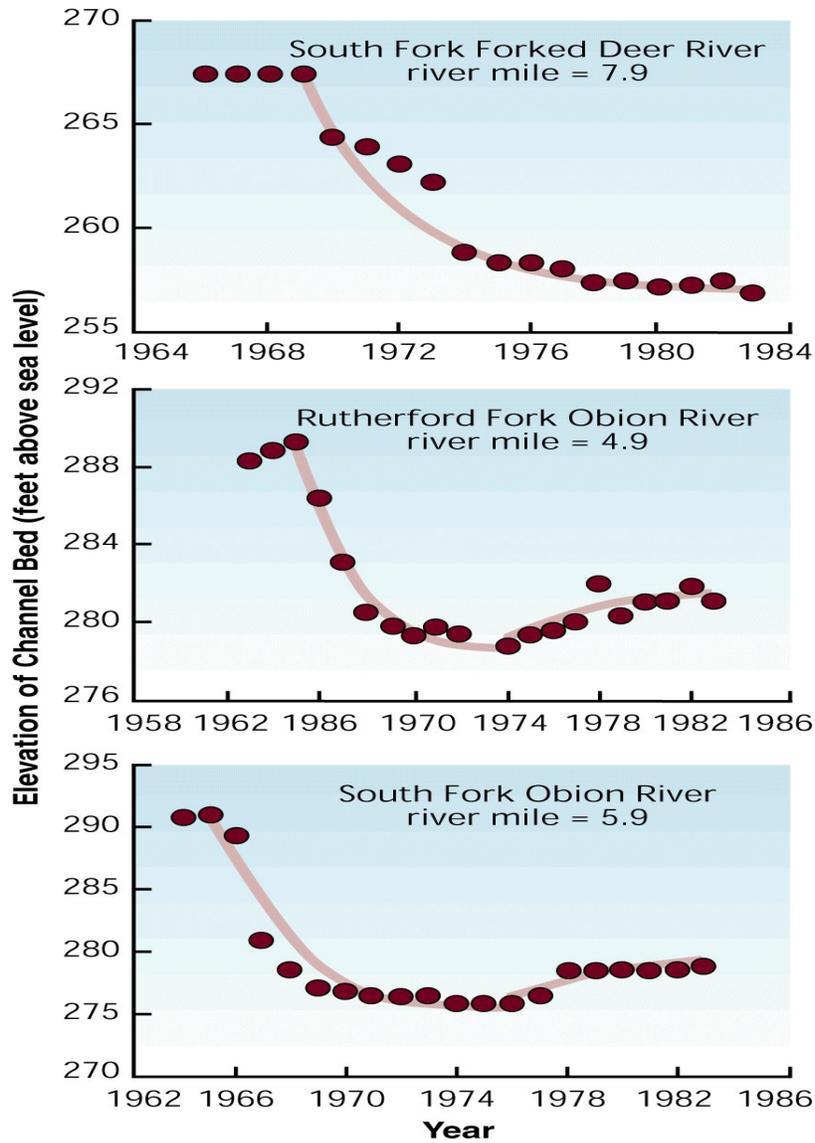
Geomorphic indicators of recent channel incision (e.g., obligate and facultative riparian species on present-day stream terraces elevated above the water table) also may be helpful for diagnosing channel conditions. However, long-term trends in channel evolution are often reversed during major flood events, especially for intermittent and ephemeral channels in arid and semiarid environments. Thus, a stream that is degrading during annual and intermediate flood events may be filled with sediment (i.e., it may aggrade) from tributary inputs during a major flood, and channels that are associated with sediment storage (i.e., aggrading) during the majority of runoff events may be "blown out" with major degradation during unusual and extreme large floods.

In some situations, a quantitative analysis of channel degradation may be warranted. Plots of streambed elevation against time permit evaluation of bed-level adjustment and indicate whether a major phase of channel incision has passed or is ongoing. However, comparative channel survey data are rarely available for the proposed location for a pipeline to cross a channel. In instances where a gaging station is operated at or near the crossing, it is usually possible to determine long-term aggradation or degradation by plotting the change in stage through time for one or more selected discharges. The procedure is called a specific-gage analysis (Figure 7) and is described in detail in *Stream Corridor Restoration: Principles, Processes, and Practices* (Federal Interagency Stream Restoration Working Group 1998). When there is no gaging station near the proposed channel crossing, nearby locations on the same stream or in the same river basin may provide a regional perspective on long-term channel adjustments. However, specific-gage records indicate only the conditions in the vicinity of the particular gaging station and do not necessarily reflect river response farther upstream or downstream of the gage. Therefore, it is advisable to investigate other data in order to make predictions about potential channel degradation at a site.

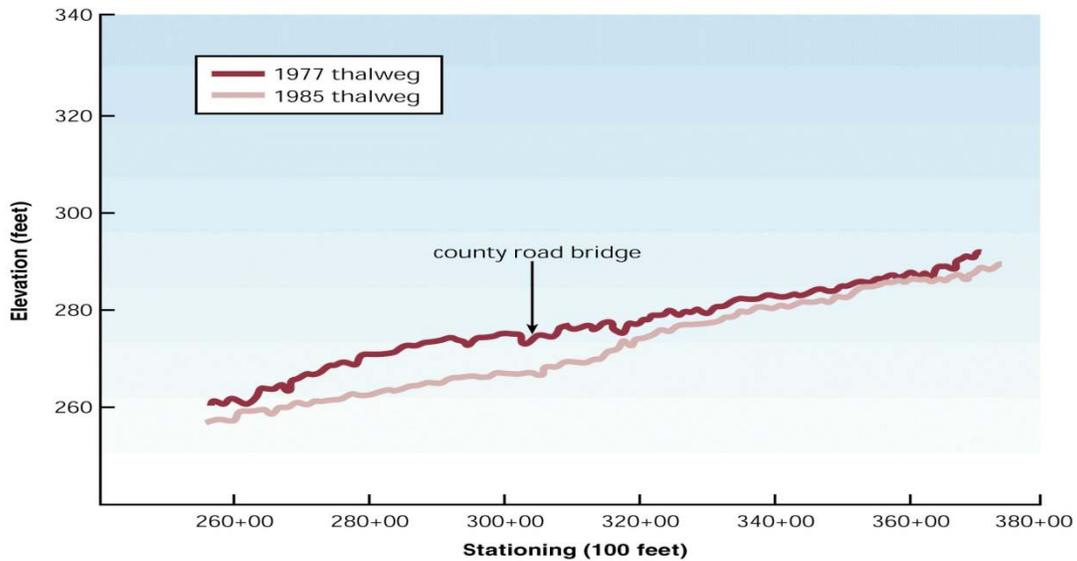


**Figure 7. Specific-gage plots of the gage heights associated with index flows through time may indicate general channel lowering in the drainage basin (Federal Interagency Stream Restoration Working Group 1998; Biedenharn et al. 1997).**

Other sources of information include the biannual bridge inspection reports required in all States for bridge maintenance. In most States, these reports include channel cross sections or bed elevations under the bridge, and a procedure similar to specific gage analysis may be attempted (Figure 8). Simon (1989, 1992) presents mathematical functions for describing bed-level adjustments through time, fitting elevation data at a site to either a power function or an exponential function of time. Successive cross sections from a series of bridges in a basin also may be used to construct a longitudinal profile of the channel network; sequential profiles so constructed may be used to document channel adjustments through time (Figure 9). Again, bridge inspection reports so used indicate only the conditions in the vicinity of those particular bridges (where local scour may be present) and must be interpreted judiciously for sites upstream, downstream, or between the bridges used in the analysis.



**Figure 8. Plots of bed elevation versus time may be developed from biannual bridge inspection reports to document systemwide degradation or aggradation (Federal Interagency Stream Restoration Working Group 1998).**



**Figure 9. Sequential longitudinal profiles also may be used to document channel lowering through time (Federal Interagency Stream Restoration Working Group 1988; Biedenharn et al. 1997).**

In the absence of channel surveys, gaging stations, and bridge inspection reports (or other records of structural repairs along a channel), it may be necessary to investigate channel aggradation and degradation using quantitative techniques described in Richardson et al. (2001) and Lagasse et al. (2001). Techniques for assessing vertical stability of the channel include incipient motion analysis, analysis of armoring potential, equilibrium slope analysis, and sediment continuity analysis. Incipient motion analysis and analysis of armoring potential are equally applicable to both long-term degradation and short-term scour and fill processes, while equilibrium-slope and sediment-continuity analyses are more closely tied to long-term channel processes (i.e., degradation and aggradation).

### **CHANNEL SCOUR**

In addition to long-term channel degradation at subsurface crossings, general channel scour must be addressed to ensure safety of the pipeline. General scour is different from long-term degradation in that general scour may be cyclic or related to the passing of a flood (Richardson and Davis 2001). Channel scour and fill processes occur naturally along a given channel, and both reflect the redistribution of sediment and short-term adjustments that enable the channel to maintain a quasi-equilibrium form. In other words, channels in dynamic equilibrium experience various depths of scour during the rising stages of a flood that frequently correspond to equal amounts of fill during the falling stages, resulting in minimal changes in channel-bed elevation. Where pipelines cross channels, it is important to determine the potential maximum depth of scour so that the pipeline is buried to a sufficient depth and does not become exposed when bed scour occurs during a flood.

General scour occurs when sediment transport through a stream reach is greater than the sediment load being supplied from upstream and is usually associated with changes in the channel cross section. General scour can occur in natural channels wherever a pipeline crosses a constriction in the channel cross section (contraction scour). Equations for calculating

contraction scour generally fall into two categories, depending on the inflow of bed-material sediment from upstream. In situations where there is little to no bed-material transport from upstream (generally coarse-bed streams with gravel and larger bed materials), contraction scour should be estimated using clear-water scour equations. In situations where there is considerable bed-material transport into the constricted section (i.e., for most sand-bed streams), contraction scour should be estimated using live-bed scour equations. Live-bed and clear-water scour equations can be found in many hydraulic references (e.g., Richardson and Davis 2001). In either case, estimates of general scour in the vicinity of the pipeline crossing must be added to the assessment of channel degradation for estimating the depth of burial for the crossing.

Other components of general scour can result from placement of subsurface crossings relative to the alignment of the stream channel. Pipelines crossing at bends in the channel are particularly troublesome, since bends are naturally unstable and tend to collect both ice and debris (which can cause additional constrictions in the flow). Channel-bottom elevations are usually lower on the outside of meander bends and may be more than twice as deep as the average depth in straighter portions of the channel. Crossings in the vicinity of stream confluences also create difficulties, since flood stages and hydraulic forces may be strongly influenced by backwater conditions at the downstream confluence. For example, sediment deposits from tributary inputs may induce contraction scour opposite or downstream of the deposit. Additional complications are introduced where pipelines are located near other obstructions in the channel. Channel-spanning obstructions (e.g., beaver dams or large wood) may induce plunge-pool scour downstream of the structure, and individual obstructions in the channel induce local scour akin to pier scour characteristic of bridge piers at highway crossings.

Even in the absence of contraction scour, general scour will still occur in most sand-bed channels during the passage of major floods. Since sand is easily eroded and transported, interaction between the flow of water and the sand bed results in different configurations of the stream bed with varying conditions of flow. The average height of dune bedforms is roughly one-third to one-half the mean flow depth, and the maximum height of dunes may nearly equal the mean flow depth. Thus, if the mean depth of flow in a channel was 5 feet, maximum dune height could also approach 5 feet, half of which would be below the mean elevation of the stream bed (Lagasse et al. 2001). Similarly, Simons, Li, and Associates (1982) present equations for antidune height as a function of mean velocity, but limit maximum antidune height to mean flow depth. Consequently, formation of antidunes during high flows not only increases mean water-surface elevation by one-half the wave height, it also reduces the mean bed elevation by one-half the wave height. Richardson and Davis (2001) reported maximum general scour of one to two times the average flow depth where two channels come together in a braided stream.

Pipeline crossings that are buried rather than suspended above all major flow events should address all of the components of degradation, scour, and channel-lowering due to bedforms described above. In addition, once a determination is made on how deep to bury the pipeline at the stream crossing, the elevation of the pipe should be held constant across the floodplain. If the line is placed at shallower depths beneath the floodplain, channel migration may expose the line where it is not designed to pass beneath the channel (Figure 10).



**Figure 10. Lateral migration of this stream channel during high water excavated a section of pipeline under the floodplain that was several feet shallower than at the original stream crossing.**

In complex situations or where consequences of pipeline failure are significant, consideration should be given to modeling the mobile-bed hydraulics with a numerical model such as HEC-6 (U.S. Army Corps of Engineers 1993) or BRI-STARS (Molinas 1990). The Federal Interagency Stream Restoration Working Group (1998) summarizes the capabilities of these and other models and provides references for model operation and user guides where available.

## **CONCLUSION**

Pipelines that cross perennial, intermittent, and ephemeral stream channels should be constructed to withstand floods of extreme magnitude to prevent rupture and accidental contamination of runoff during high flow events. Pipelines crossing at the surface must be constructed high enough to remain above the highest possible floodflows at each crossing, and pipelines crossing below the surface must be buried deep enough to remain undisturbed by scour and fill processes typically associated with passage of peak flows. A hydraulic analysis should be completed during the pipeline design phase to avoid repeated maintenance of such crossings and eliminate costly repairs and potential environmental degradation associated with pipeline breaks at stream crossings.

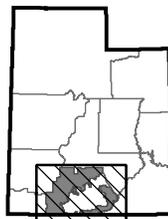
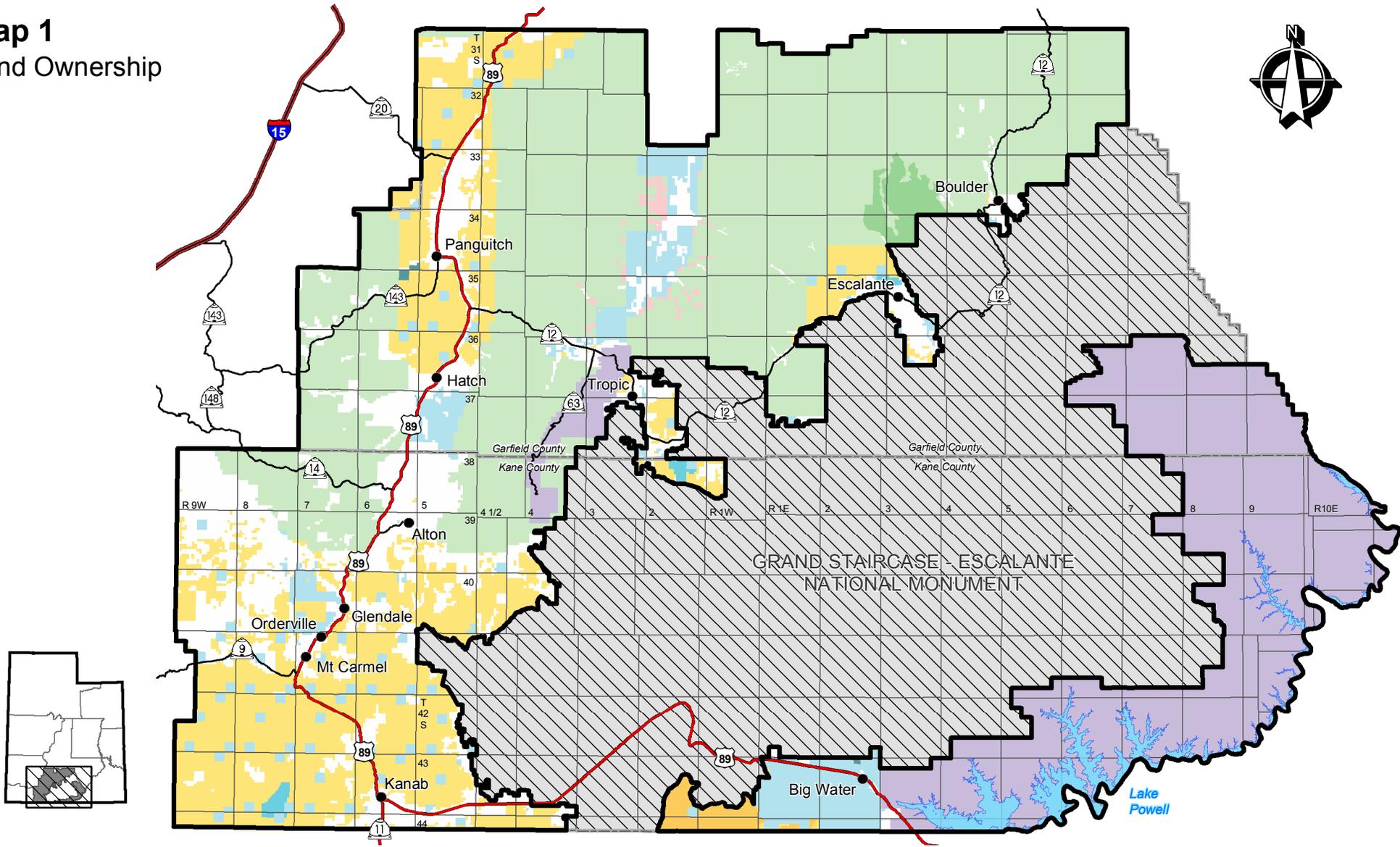
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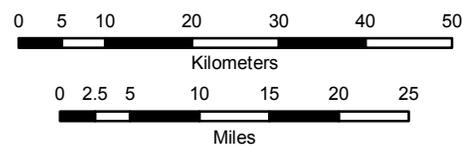
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**Map 1**  
 Land Ownership



- |                                 |   |                    |
|---------------------------------|---|--------------------|
| BLM Wilderness Area             | State                                       | Kanab Field Office |
| Bankhead-Jones Land Use Lands   | Wildlife, Park and Outdoor Recreation Areas | Interstate Highway |
| Bureau of Land Management (BLM) | US Forest Service (USFS)                    | U.S. Highway       |
| National Park Service (NPS)     | USFS Wilderness Area                        | State Highway      |
| Private                         | Water                                       | Water              |
|                                 |   | Towns              |



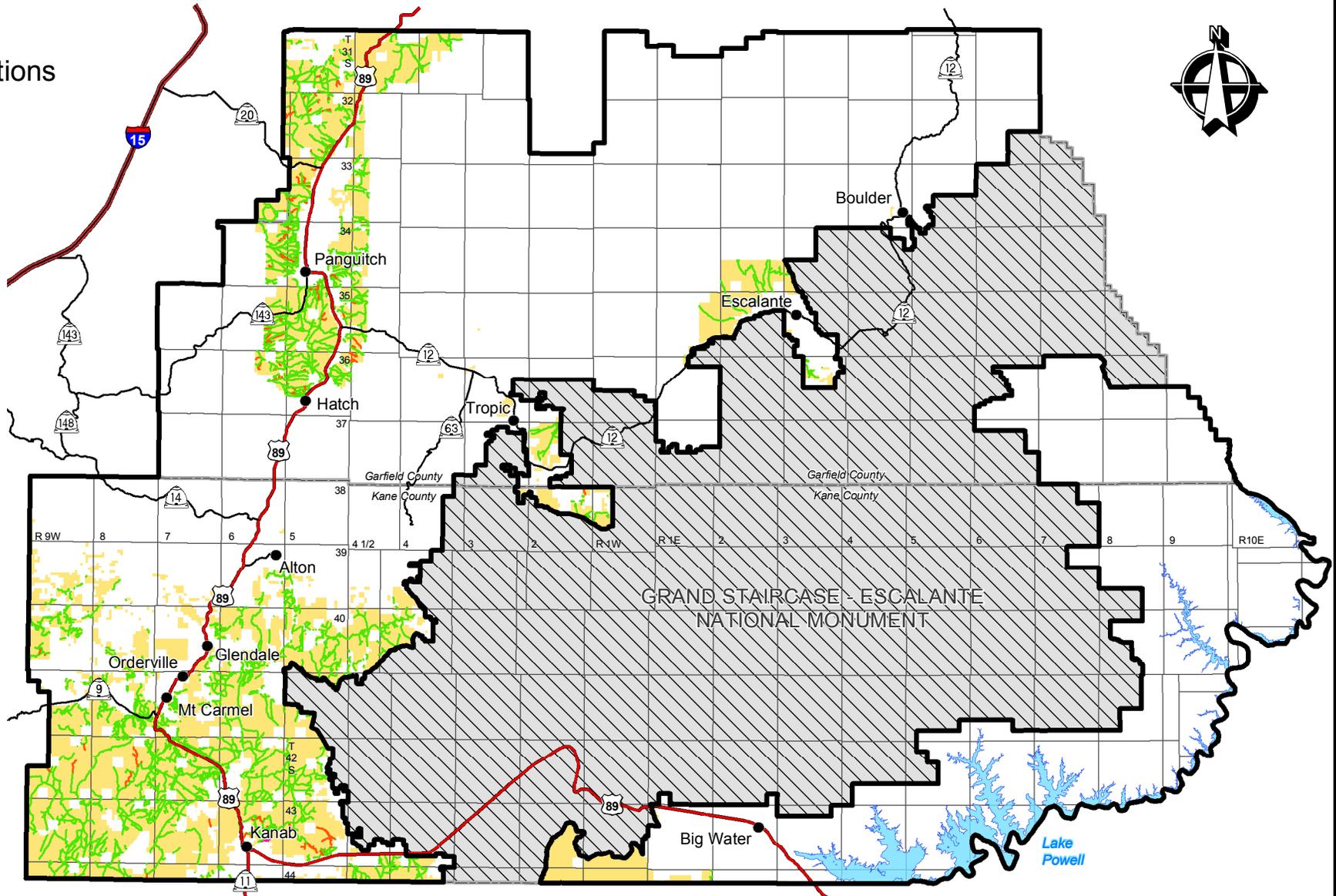
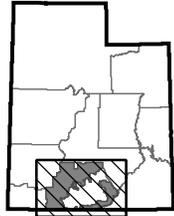
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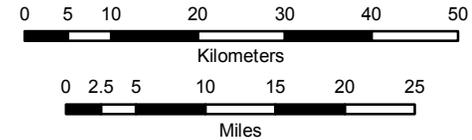
**Map 10**

Route Designations  
 Approved RMP



- Closed
- Limited
- Open
- BLM Managed Lands

- Kanab Field Office
- Interstate Highway
- U.S. Highway
- State Highway
- Water
- Towns

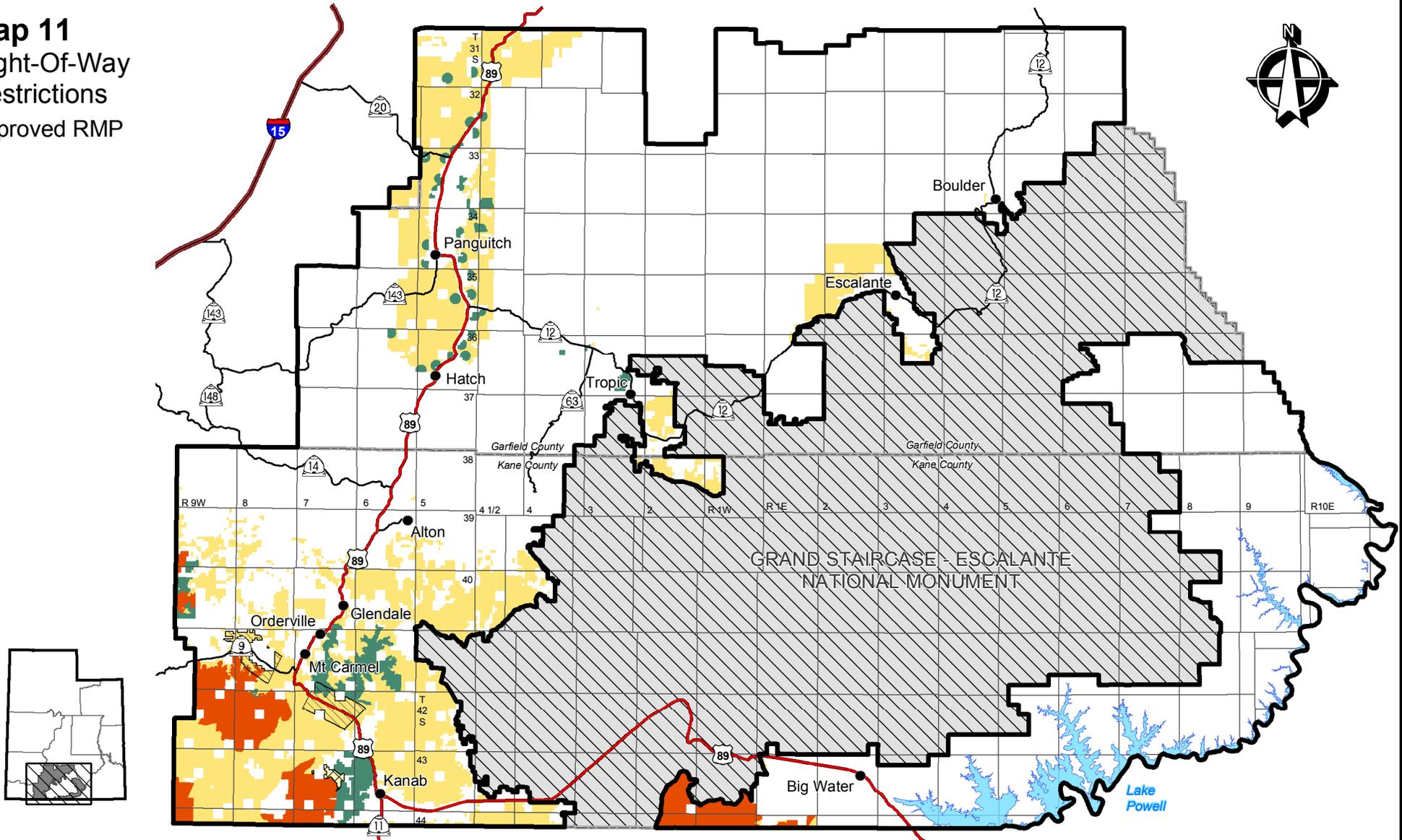


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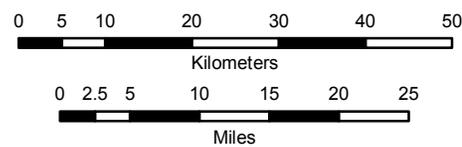


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**Map 11**  
 Right-Of-Way  
 Restrictions  
 Approved RMP



- Avoidance
- Exclusion
- Seasonal Avoidance
- BLM Managed Lands
- Excluded from wind and solar energy development
- Kanab Field Office
- Interstate Highway
- U.S. Highway
- State Highway
- Water
- Towns



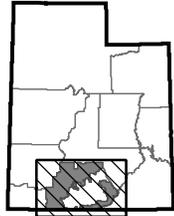
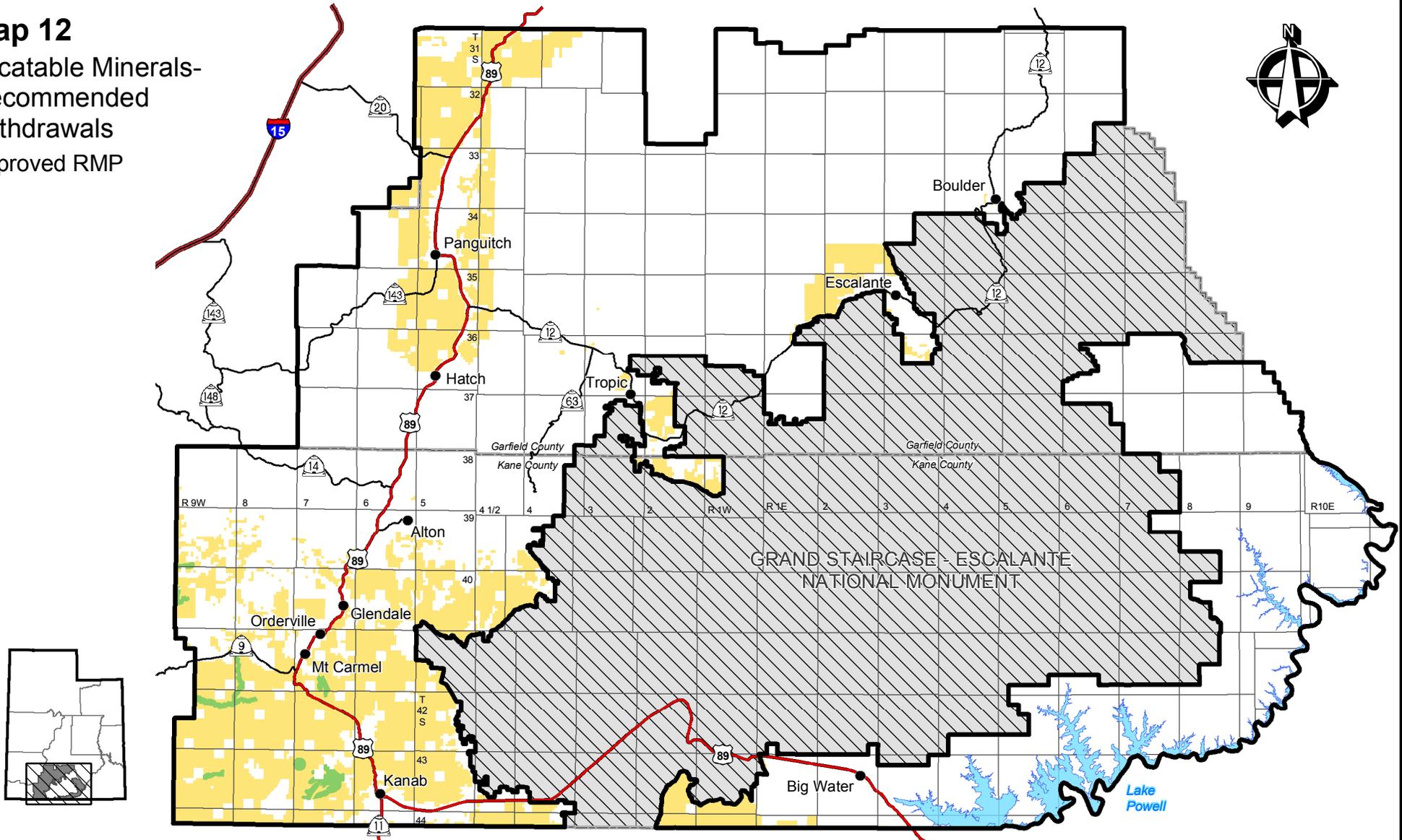
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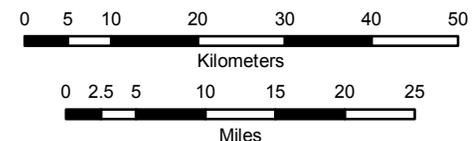
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**Map 12**

Locatable Minerals-  
 Recommended  
 Withdrawals  
 Approved RMP



- Areas Recommended for Withdrawal from Locatable Mineral Entry
- BLM Managed Lands
- Kanab Field Office
- Interstate Highway
- U.S. Highway
- State Highway
- Water
- Towns



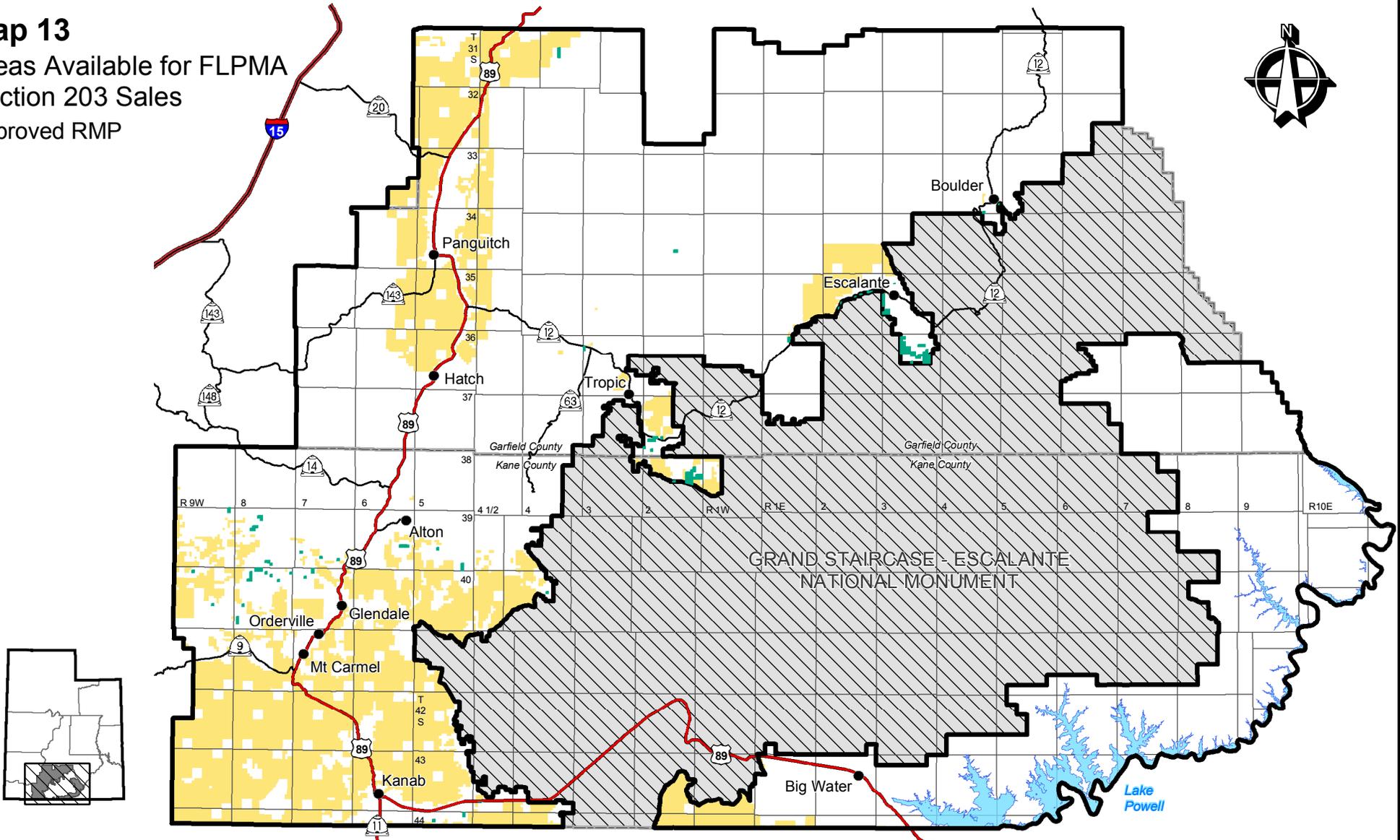
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**Map 13**

Areas Available for FLPMA  
 Section 203 Sales  
 Approved RMP



Lands Available for FLPMA Section 203 Sales

BLM Managed Lands

Kanab Field Office

Interstate Highway

U.S. Highway

State Highway

Water

Towns

0 5 10 20 30 40 50

Kilometers

0 2.5 5 10 15 20 25

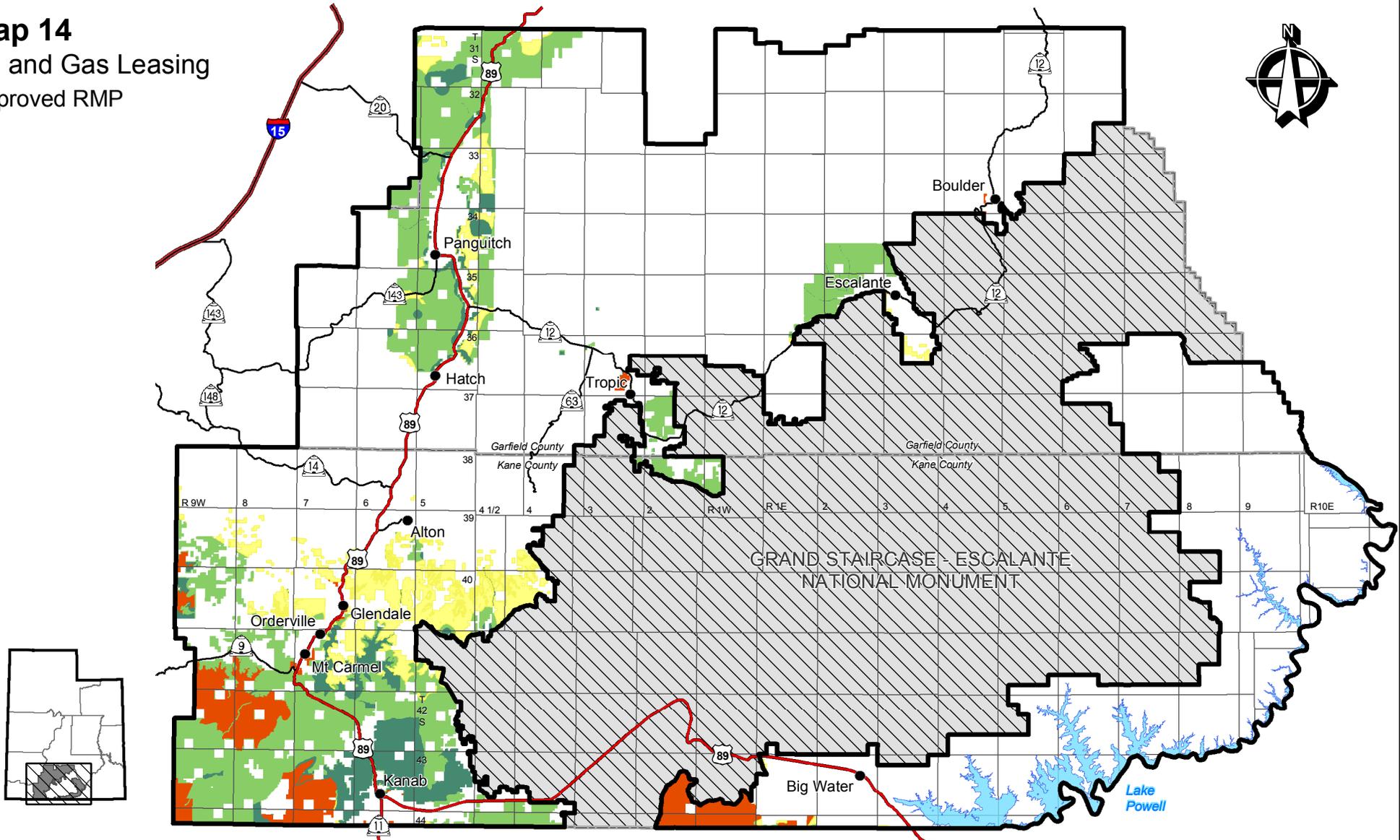
Miles

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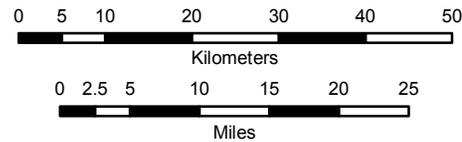
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**Map 14**  
 Oil and Gas Leasing  
 Approved RMP



- Closed to Leasing
- Open to Leasing Subject to Major Constraints
- Open to Leasing Subject to Moderate Constraints
- Open to Leasing Subject to Standard Terms and Conditions

- Kanab Field Office
- Interstate Highway
- U.S. Highway
- State Highway
- Water
- Towns

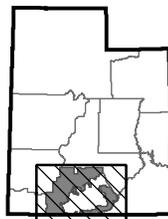
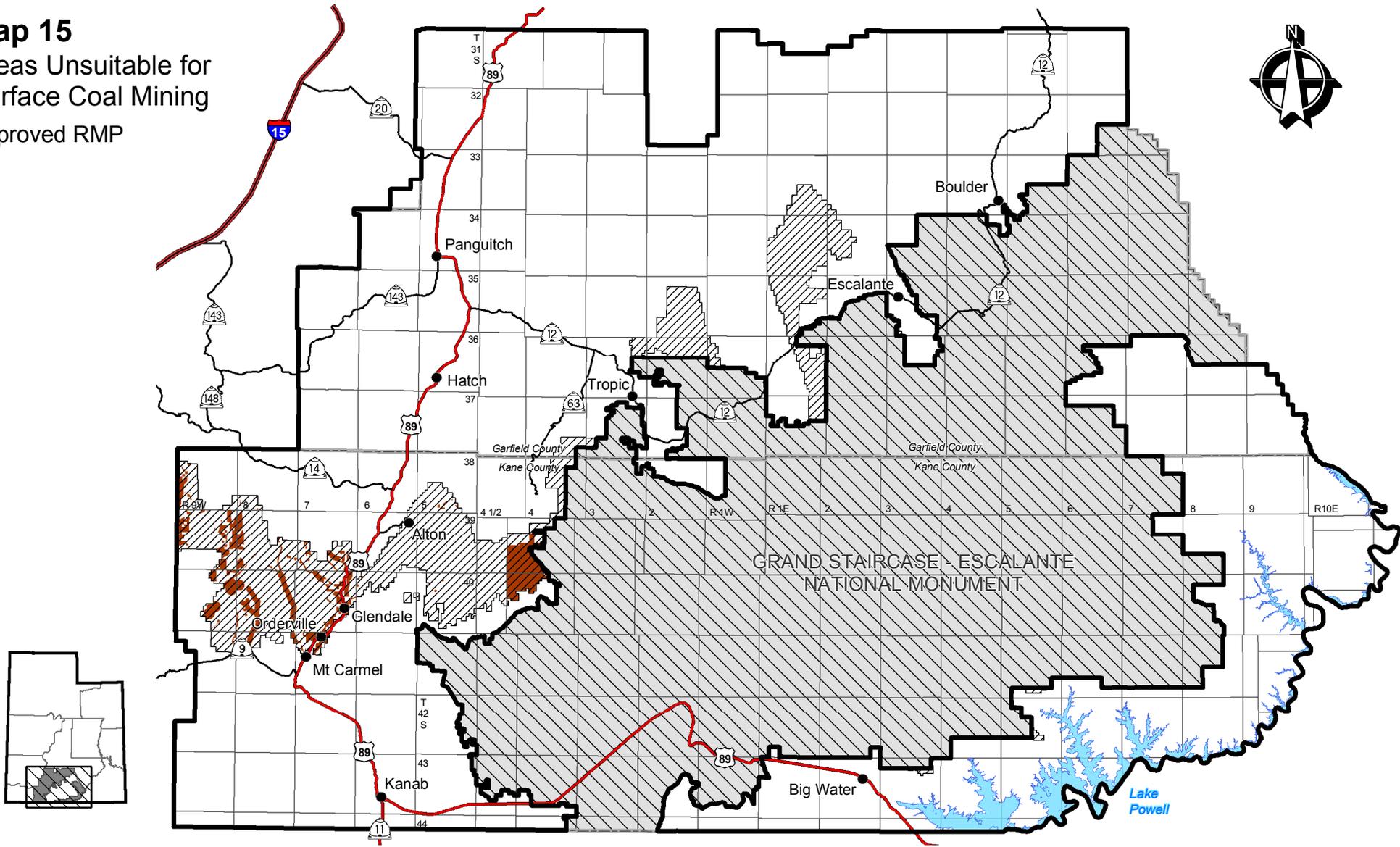


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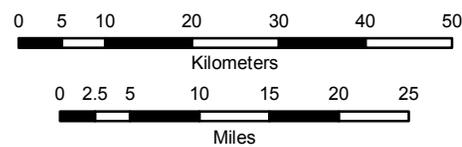


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**Map 15**  
 Areas Unsuitable for  
 Surface Coal Mining  
 Approved RMP



-  Known Recoverable Coal Resource Area
-  Coal Resources Considered Unsuitable for Surface Coal Mining
-  Kanab Field Office
-  Interstate Highway
-  U.S. Highway
-  State Highway
-  Water
-  Towns



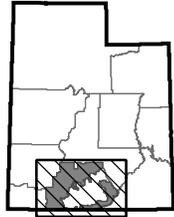
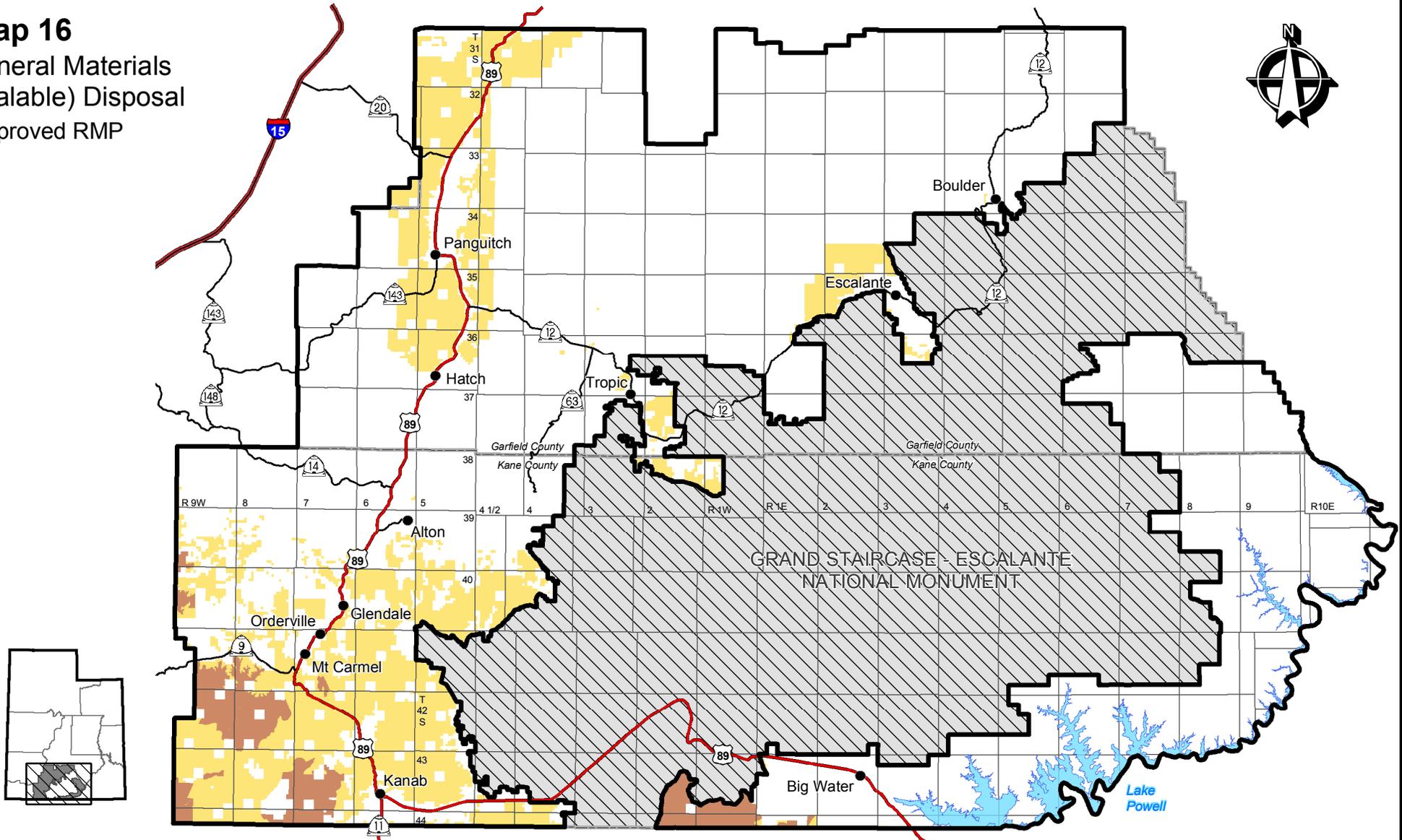
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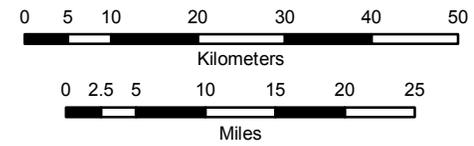
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**Map 16**

Mineral Materials  
 (Salable) Disposal  
 Approved RMP



- Closed to Mineral Materials (Salable)
- BLM Managed Lands
- Kanab Field Office
- Interstate Highway
- U.S. Highway
- State Highway
- Water
- Towns



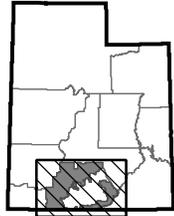
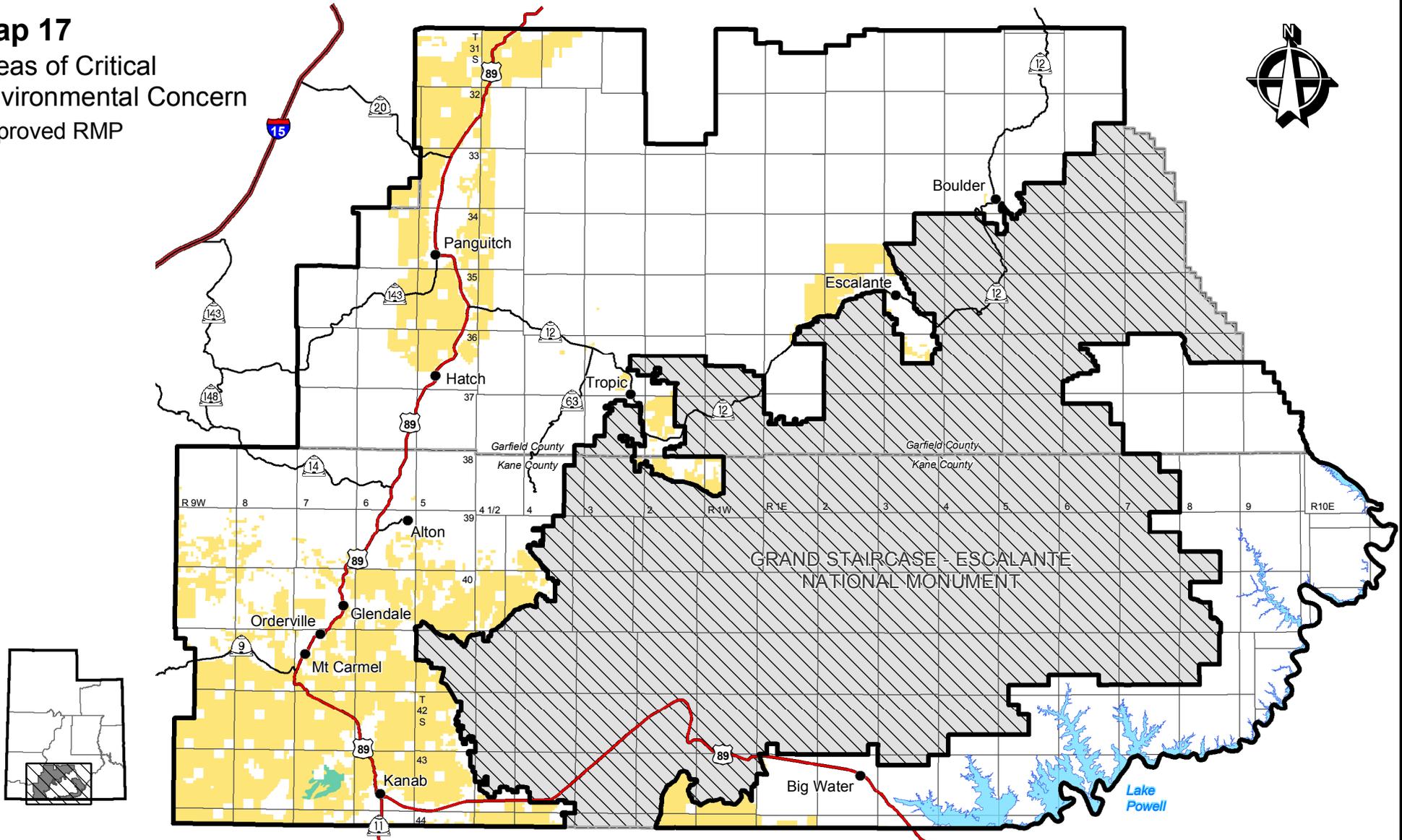
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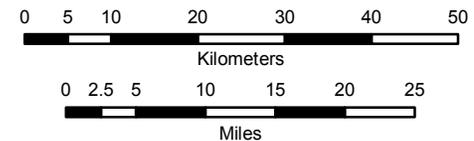
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**Map 17**

Areas of Critical Environmental Concern  
 Approved RMP



- Cottonwood Canyon ACEC
- BLM Managed Lands
- Kanab Field Office
- Interstate Highway
- U.S. Highway
- State Highway
- Water
- Towns

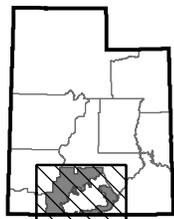
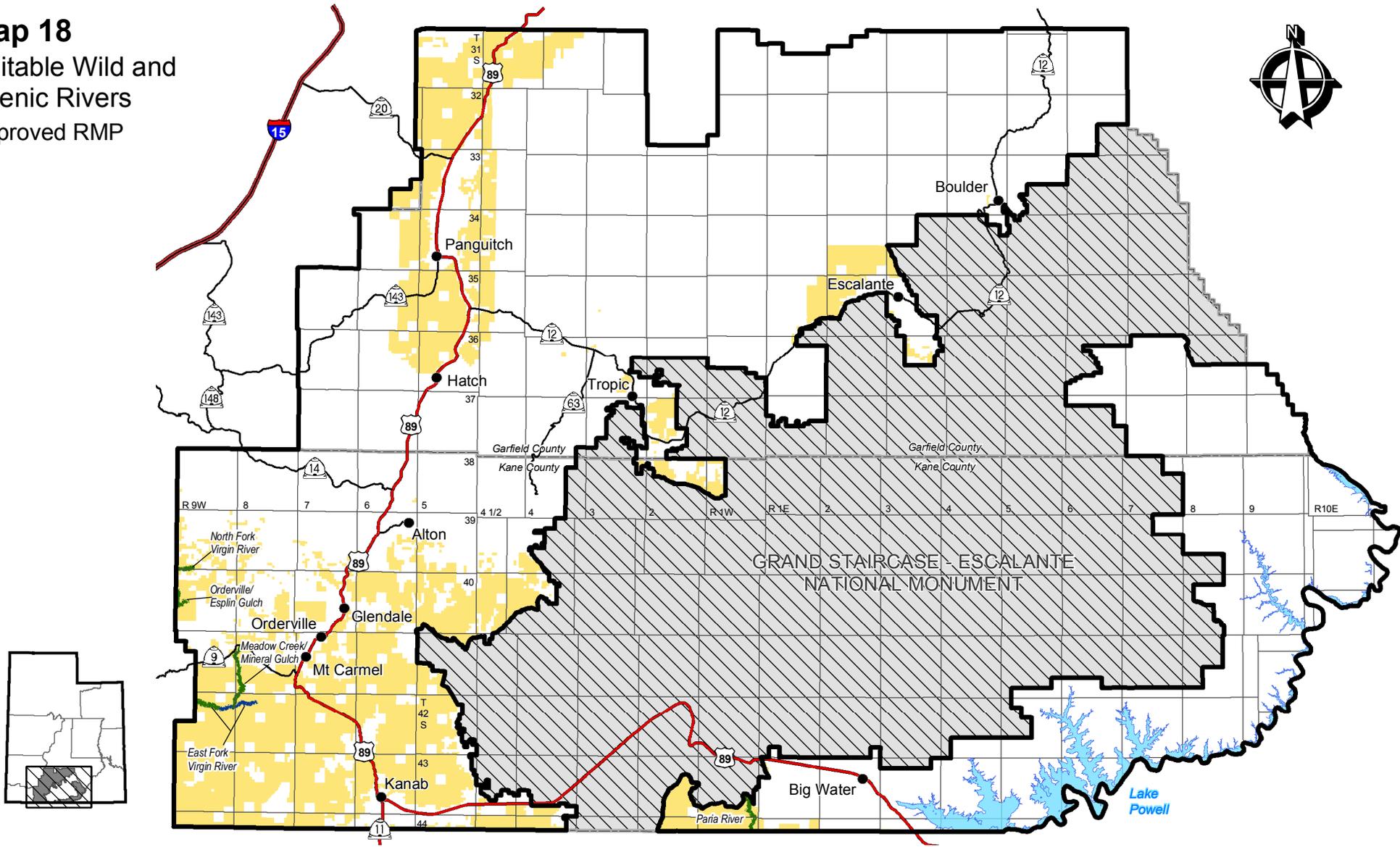


Projection: UTM, Zone 12 North  
 Datum: North American Datum of 1983 (NAD83)  
 Kanab Field Office, GIS Program  
 October 2008

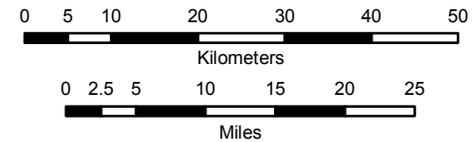


No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of this data for individual use or aggregate use with other data.

**Map 18**  
 Suitable Wild and  
 Scenic Rivers  
 Approved RMP



- Scenic
- Wild
- BLM Managed Lands
- Kanab Field Office
- Interstate Highway
- U.S. Highway
- State Highway
- Water
- Towns



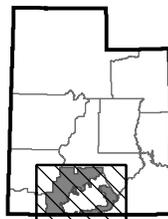
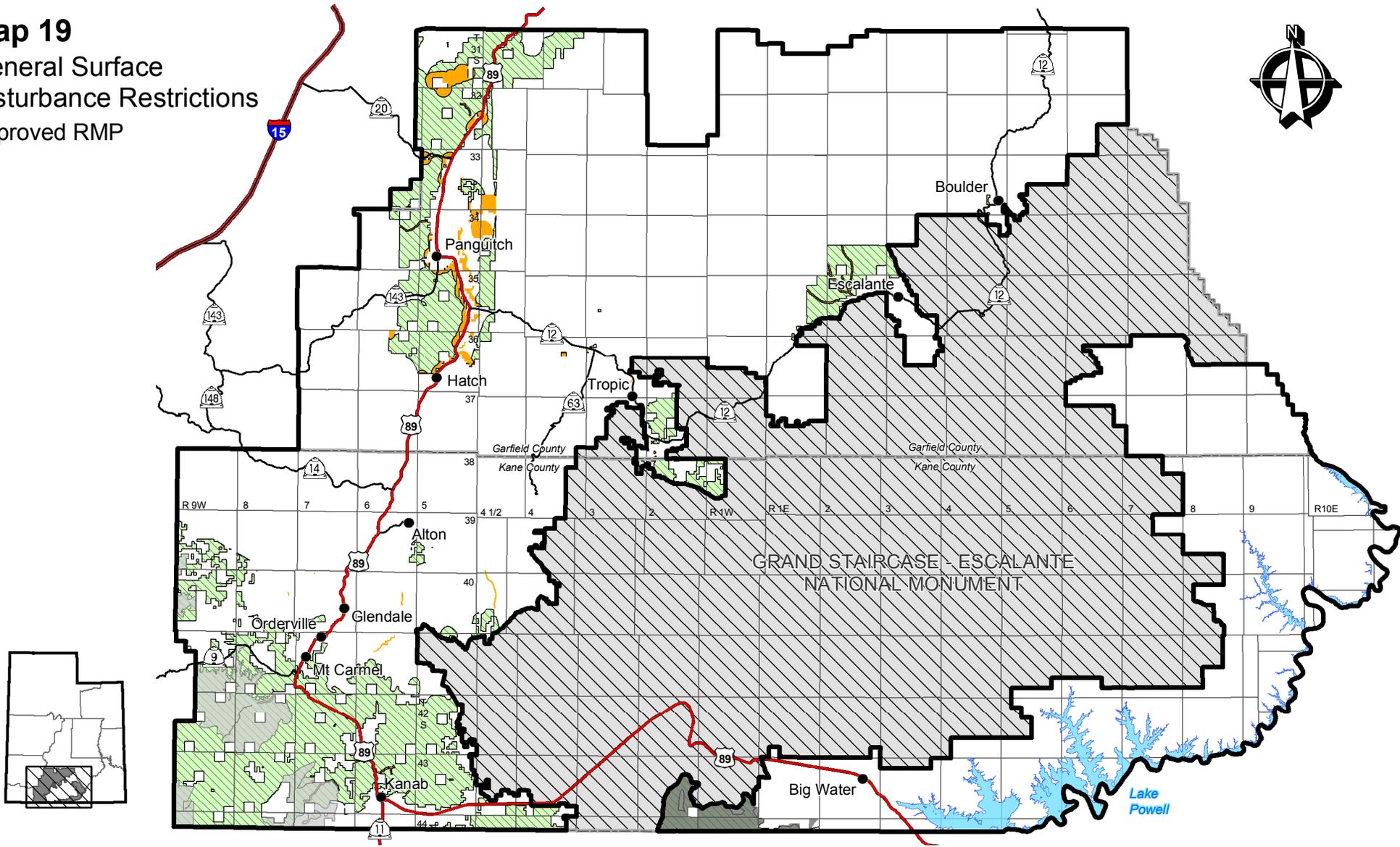
Projection: UTM, Zone 12 North  
 Datum: North American Datum of 1983 (NAD83)  
 Kanab Field Office, GIS Program  
 October 2008



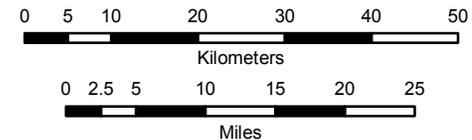
No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of this data for individual use or aggregate use with other data.

**Map 19**

General Surface  
 Disturbance Restrictions  
 Approved RMP



- No Surface Disturbing Actions
- Seasonal Limitations
- Wilderness Study Areas
- BLM Wilderness Area
- Kanab Field Office
- Interstate Highway
- U.S. Highway
- State Highway
- Water
- Towns

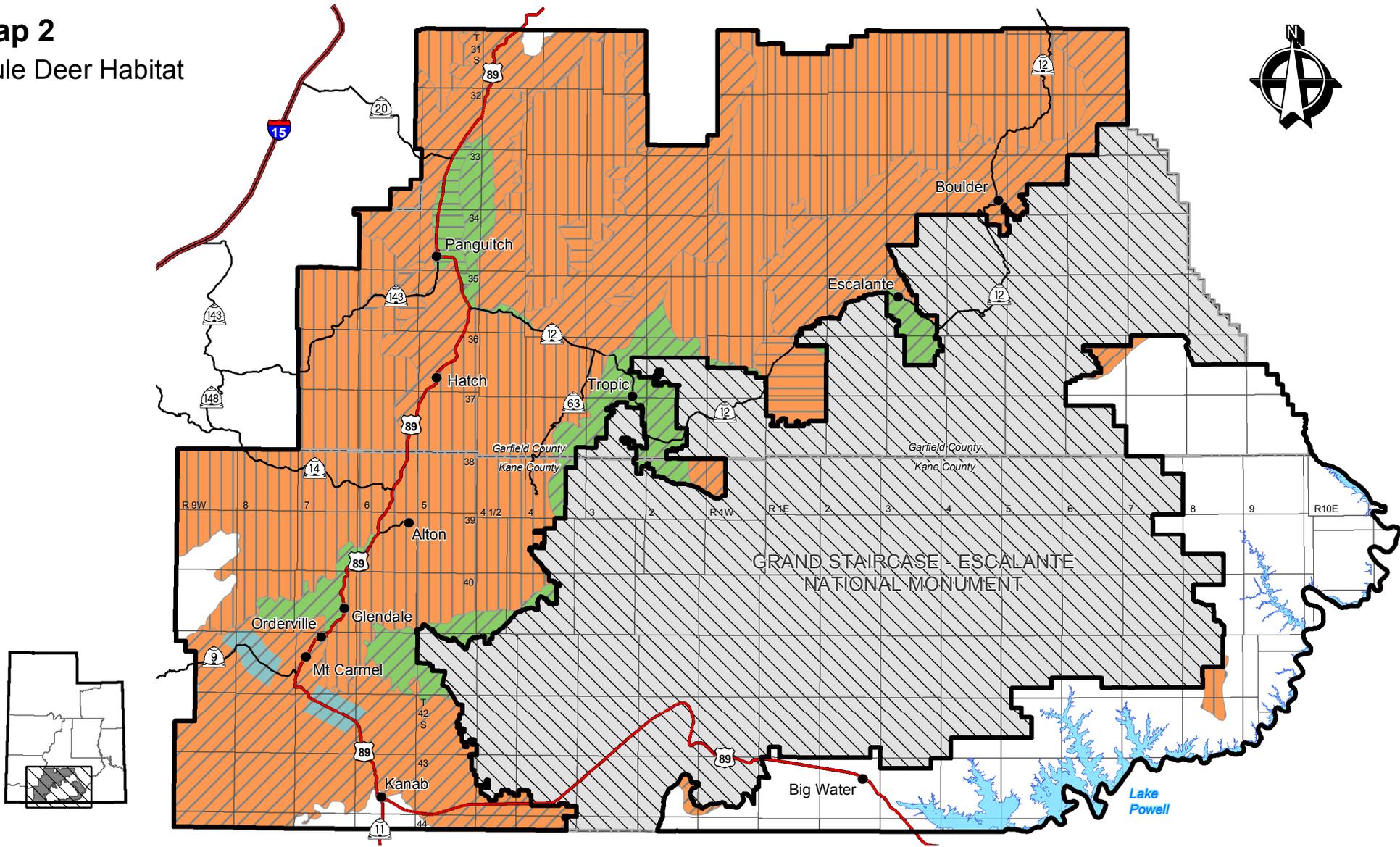


Projection: UTM, Zone 12 North  
 Datum: North American Datum of 1983 (NAD83)  
 Kanab Field Office, GIS Program  
 October 2008

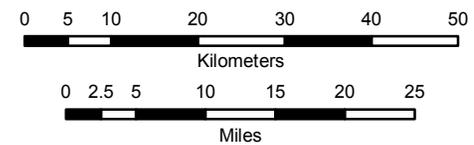


No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of this data for individual use or aggregate use with other data.

**Map 2**  
 Mule Deer Habitat



- |                            |               |                           |
|----------------------------|---------------|---------------------------|
| <b>Habitat Value</b>       | <b>Season</b> | <b>Kanab Field Office</b> |
| Crucial                    | Summer        | Interstate Highway        |
| Substantial                | Winter        | U.S. Highway              |
| Mule Deer Transition Areas | Year-long     | State Highway             |
|                            |               | Water                     |
|                            |               | Towns                     |



Source: Utah Division of Wildlife Resources 2006  
 Projection: UTM, Zone 12 North  
 Datum: North American Datum of 1983 (NAD83)  
 Kanab Field Office, GIS Program  
 October 2008

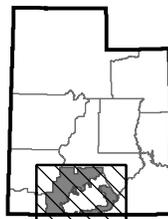
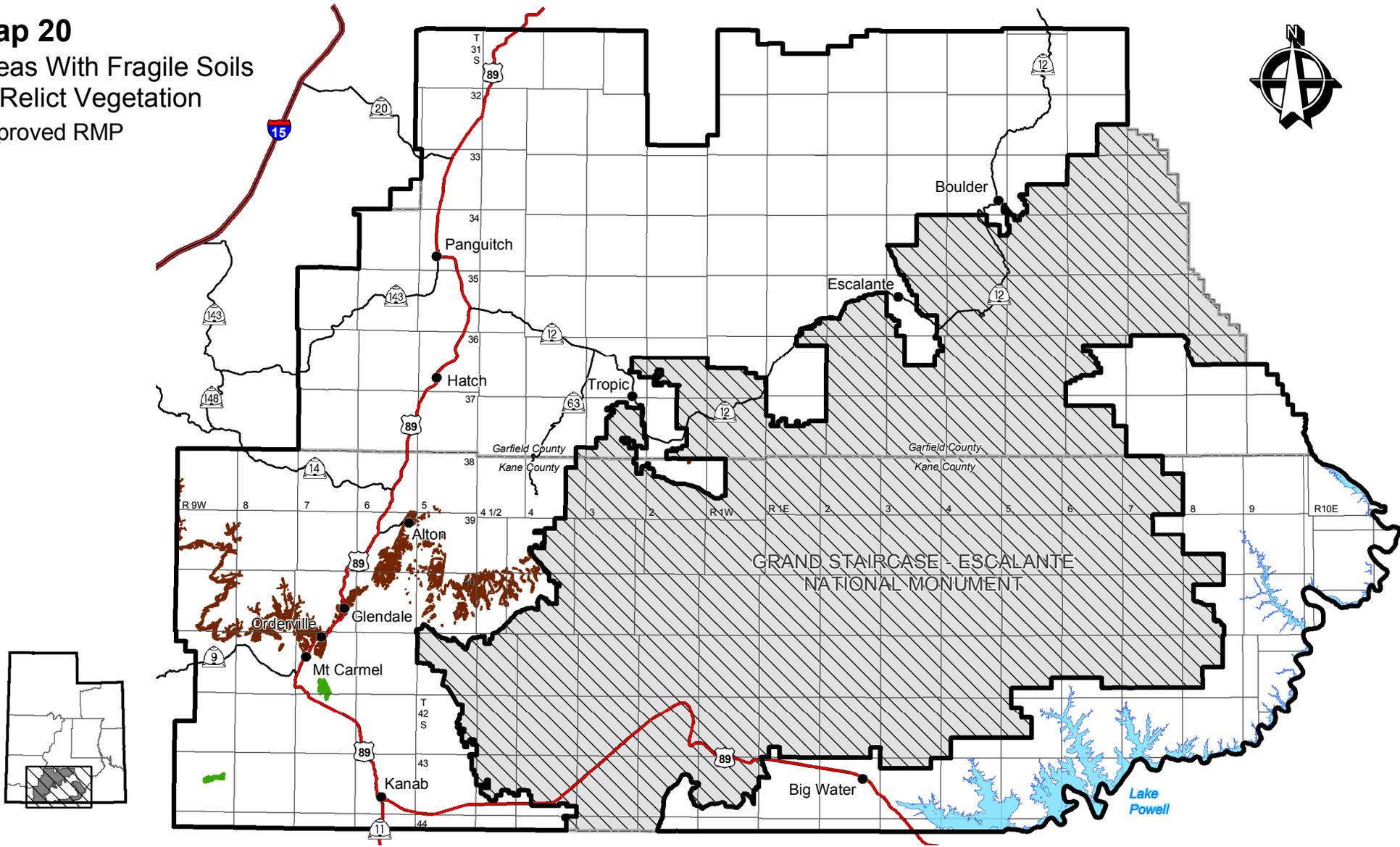


Surface disturbing activities are not excluded in these areas. All timing and controlled surface use limitations are subject to waivers, exceptions, and/or modification identified in Appendix 3.

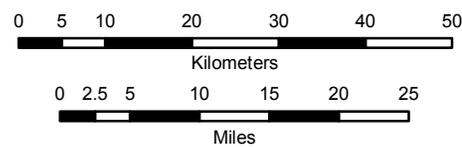
No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of this data for individual use or aggregate use with other data.

**Map 20**

Areas With Fragile Soils  
 or Relict Vegetation  
 Approved RMP



- Fragile Soils
- Relict Vegetation
- Kanab Field Office
- Interstate Highway
- U.S. Highway
- State Highway
- Water
- Towns



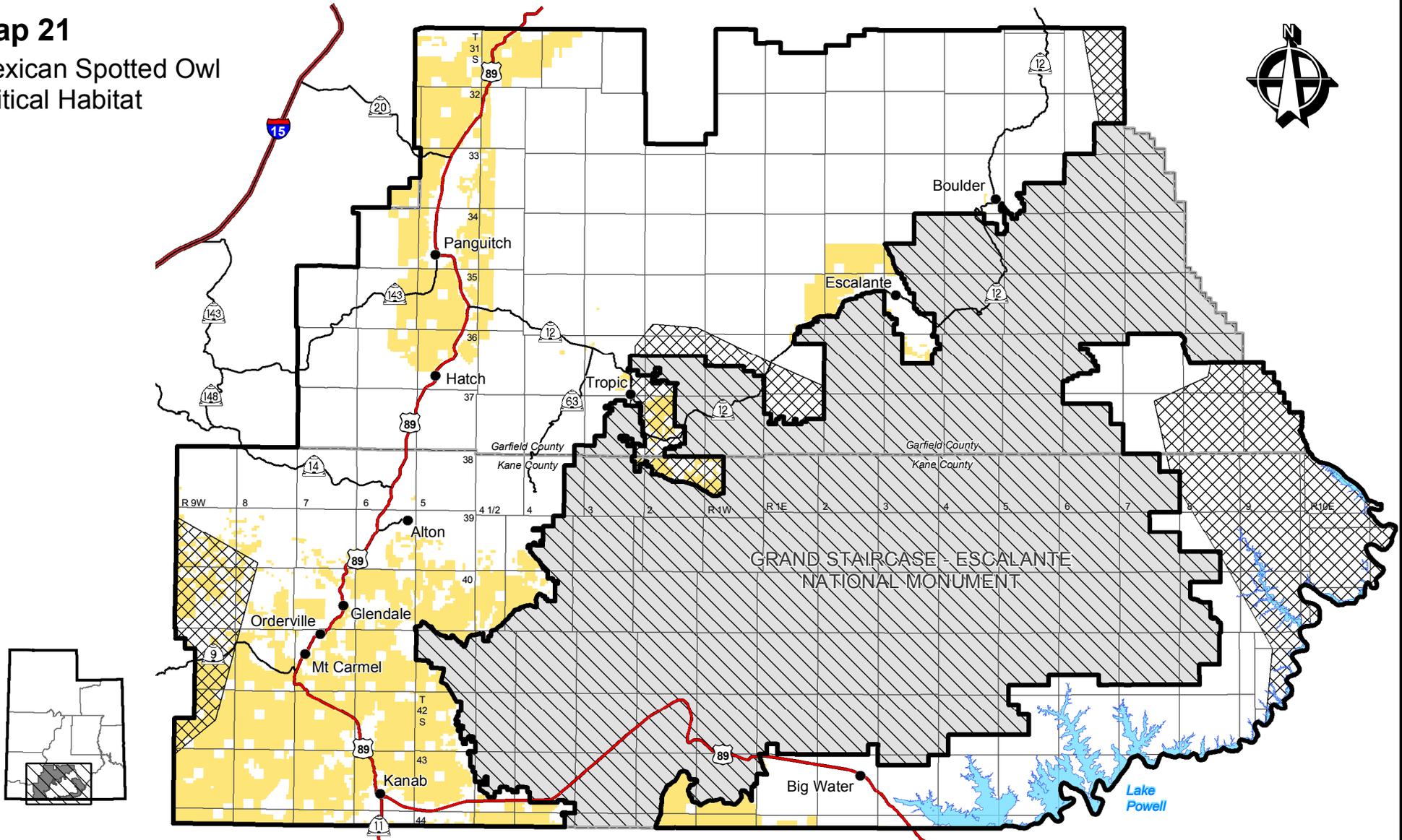
Projection: UTM, Zone 12 North  
 Datum: North American Datum of 1983 (NAD83)  
 Kanab Field Office, GIS Program  
 October 2008



No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of this data for individual use or aggregate use with other data.

**Map 21**

Mexican Spotted Owl  
 Critical Habitat



Mexican Spotted Owl Critical Habitat

BLM Managed Lands

Kanab Field Office

Interstate Highway

U.S. Highway

State Highway

Water

Towns

0 5 10 20 30 40 50

Kilometers

0 2.5 5 10 15 20 25

Miles

Source: U. S. Fish & Wildlife Service 2004

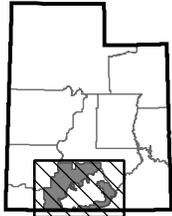
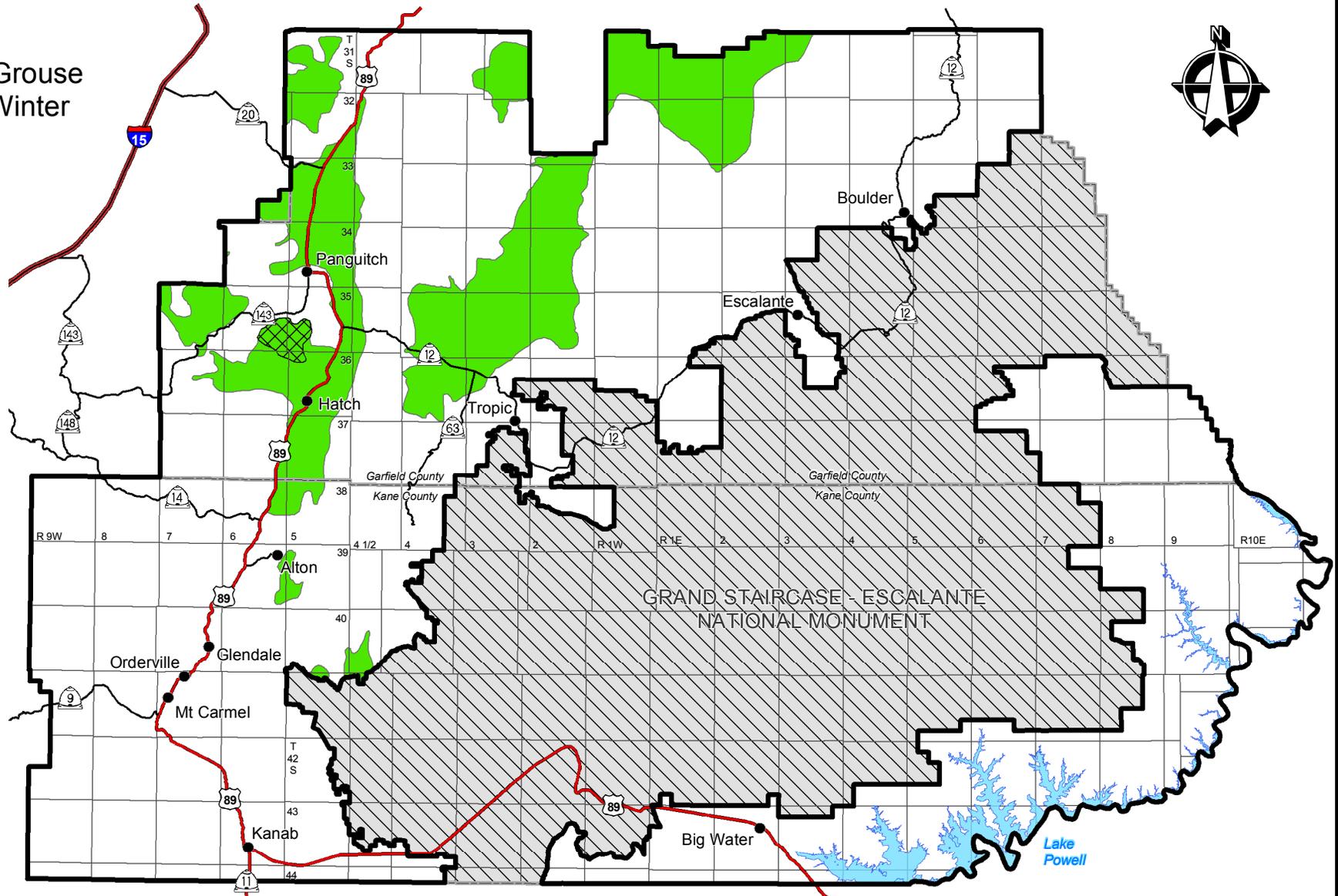
Projection: UTM, Zone 12 North  
 Datum: North American Datum of 1983 (NAD83)  
 Kanab Field Office, GIS Program  
 October 2008



No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of this data for individual use or aggregate use with other data.

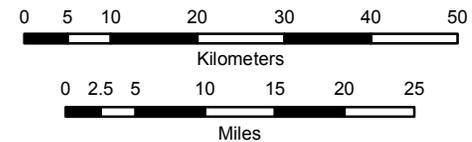
**Map 22**

Greater Sage-Grouse  
 Brooding and Winter  
 Habitat



-  Greater Sage-Grouse Winter Range
-  Greater Sage-Grouse Brooding Areas

-  Kanab Field Office
-  Interstate Highway
-  U.S. Highway
-  State Highway
-  Water
-  Towns



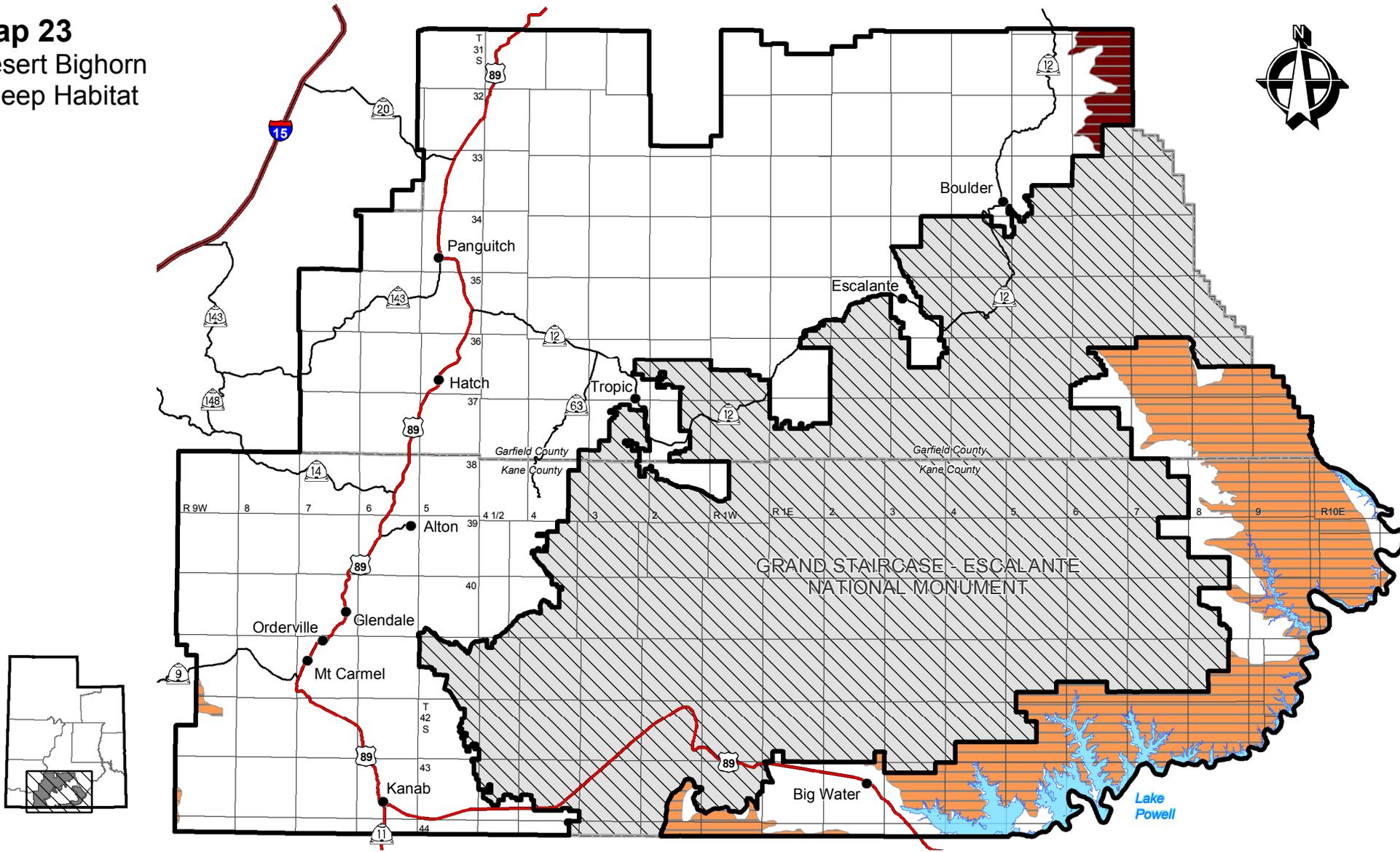
Source: Utah Division of Wildlife Resources 2006  
 Projection: UTM, Zone 12 North  
 Datum: North American Datum of 1983 (NAD83)  
 Kanab Field Office, GIS Program  
 October 2008



Surface disturbing activities are not excluded in these areas. All timing and controlled surface use limitations are subject to waivers, exceptions, and/or modification identified in Appendix 3.

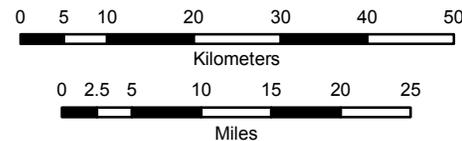
No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of this data for individual use or aggregate use with other data.

**Map 23**  
 Desert Bighorn  
 Sheep Habitat



- Habitat Value**
- Crucial
  - High
- Season**
- Year-long

- Kanab Field Office
- Interstate Highway
- U.S. Highway
- State Highway
- Water
- Towns



Source: Utah Division of Wildlife Resources 2005  
 Projection: UTM, Zone 12 North  
 Datum: North American Datum of 1983 (NAD83)  
 Kanab Field Office, GIS Program  
 October 2008

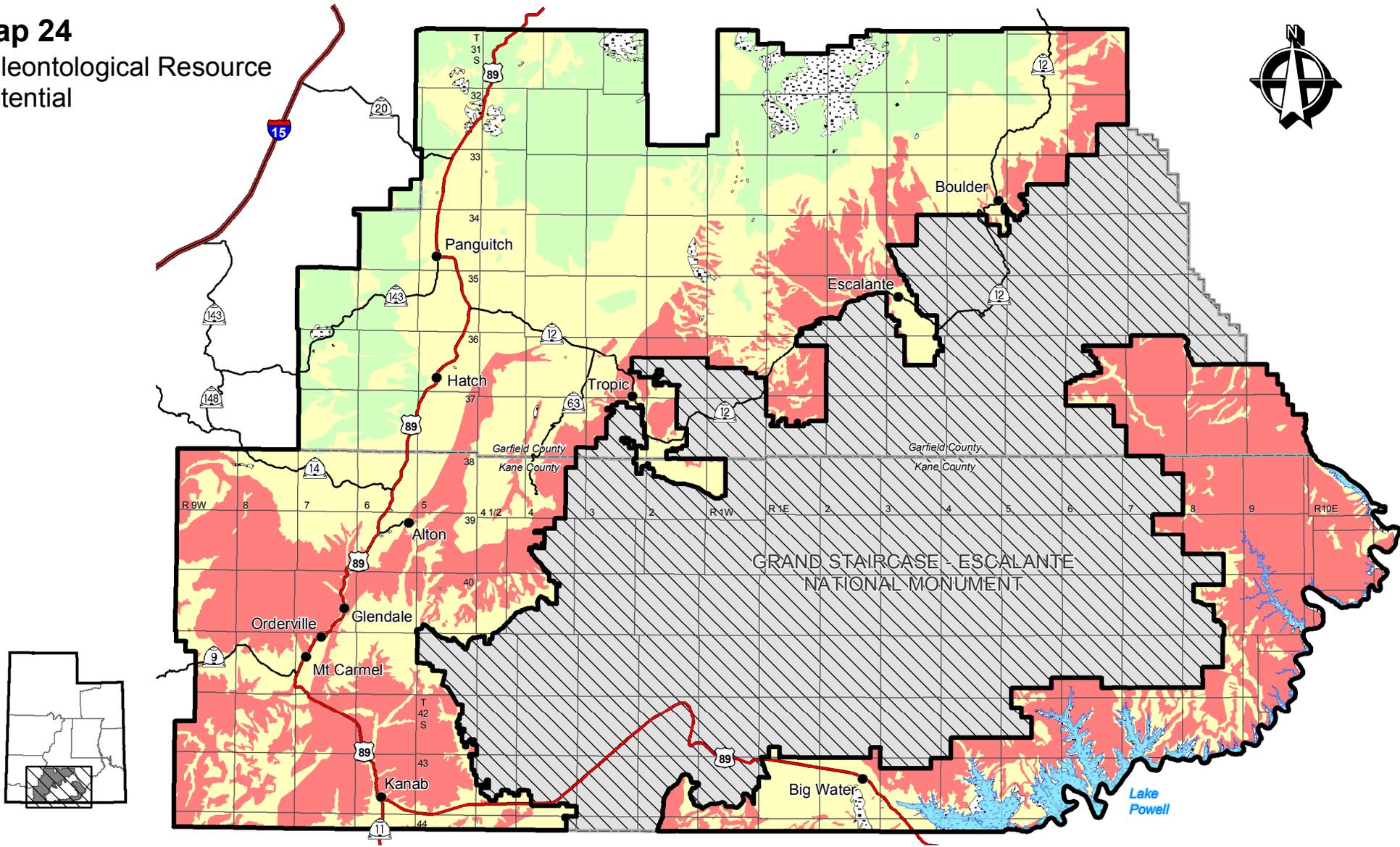


Surface disturbing activities are not excluded in these areas. All timing and controlled surface use limitations are subject to waivers, exceptions, and/or modification identified in Appendix 3.

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of this data for individual use or aggregate use with other data.

**Map 24**

Paleontological Resource Potential



Paleontologic Sensitivity\*

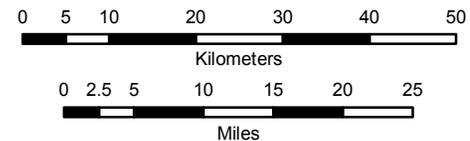
- High
- Medium
- Low
- No Data

- Kanab Field Office
- Interstate Highway
- U.S. Highway
- State Highway
- Water
- Towns

Source: Utah BLM

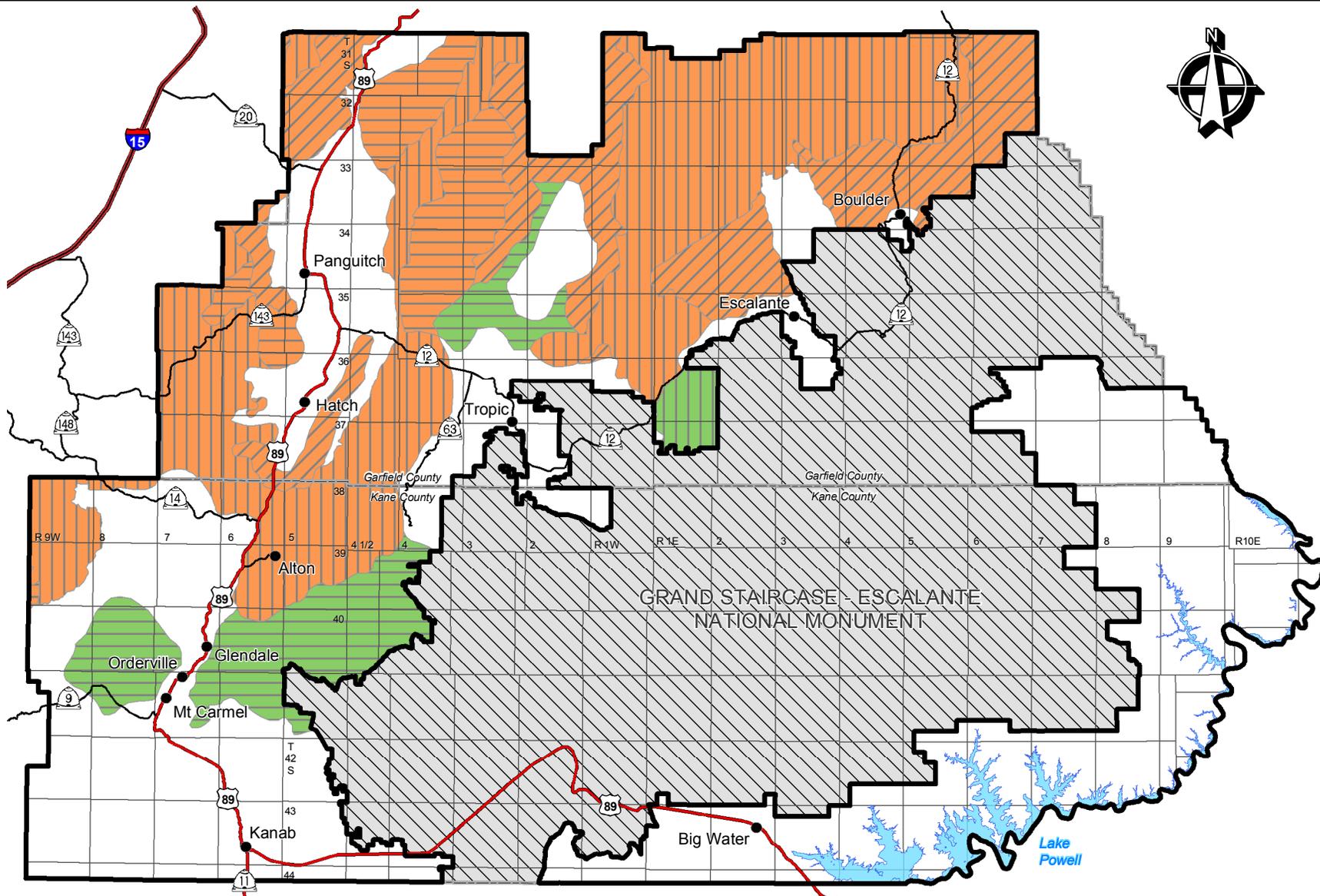
\*Please note that the dataset used to create this model lumps the Kayenta, Moenave, Navajo, and Wingate formations into the Glen Canyon Group labeled here as Medium. The Navajo and Wingate Formations rate as Medium while the Moenave and Kayenta should rate as high.

Projection: UTM, Zone 12 North  
 Datum: North American Datum of 1983 (NAD83)  
 Kanab Field Office, GIS Program  
 October 2008

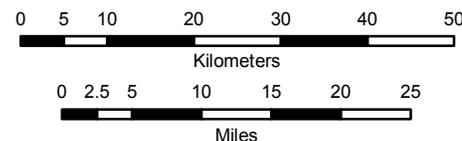


No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of this data for individual use or aggregate use with other data.

**Map 3**  
 Elk Habitat



- |                      |               |                           |
|----------------------|---------------|---------------------------|
| <b>Habitat Value</b> | <b>Season</b> | <b>Kanab Field Office</b> |
| Crucial              | Summer        | Interstate Highway        |
| Substantial          | Winter        | U.S. Highway              |
|                      | Year-long     | State Highway             |
|                      |               | Water                     |
|                      |               | Towns                     |



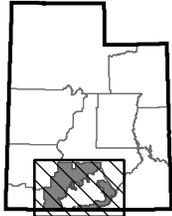
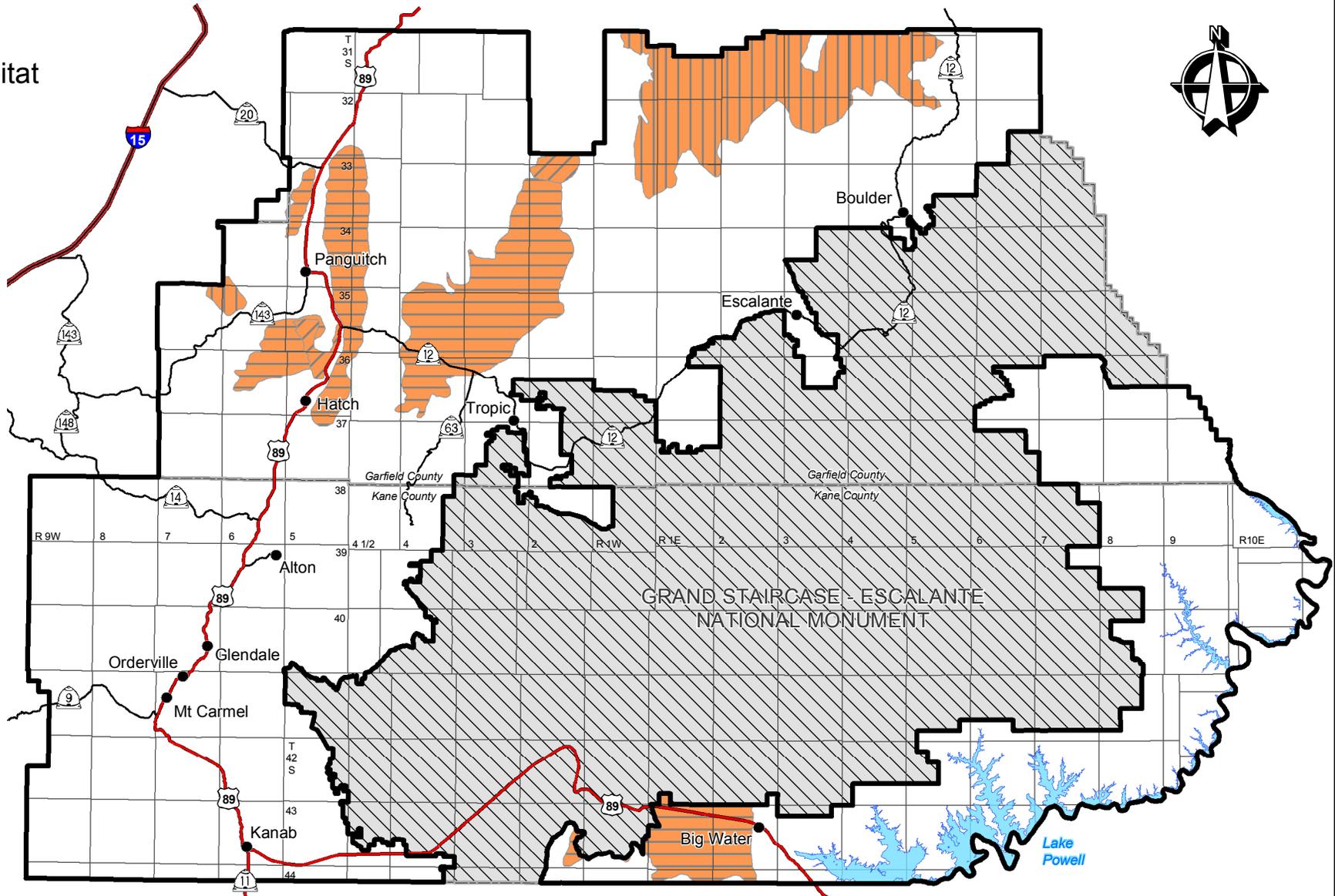
Source: Utah Division of Wildlife Resources 2006  
 Projection: UTM, Zone 12 North  
 Datum: North American Datum of 1983 (NAD83)  
 Kanab Field Office, GIS Program  
 October 2008



Surface disturbing activities are not excluded in these areas. All timing and controlled surface use limitations are subject to waivers, exceptions, and/or modification identified in Appendix 3.

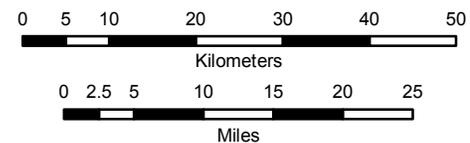
No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of this data for individual use or aggregate use with other data.

**Map 4**  
 Pronghorn Habitat



- |                      |               |                             |
|----------------------|---------------|-----------------------------|
| <b>Habitat Value</b> | <b>Season</b> | <b>—</b> Kanab Field Office |
| Crucial              | Summer        | Interstate Highway          |
|                      | Winter        | U.S. Highway                |
|                      | Year-long     | State Highway               |
|                      |               | Water                       |
|                      |               | Towns                       |

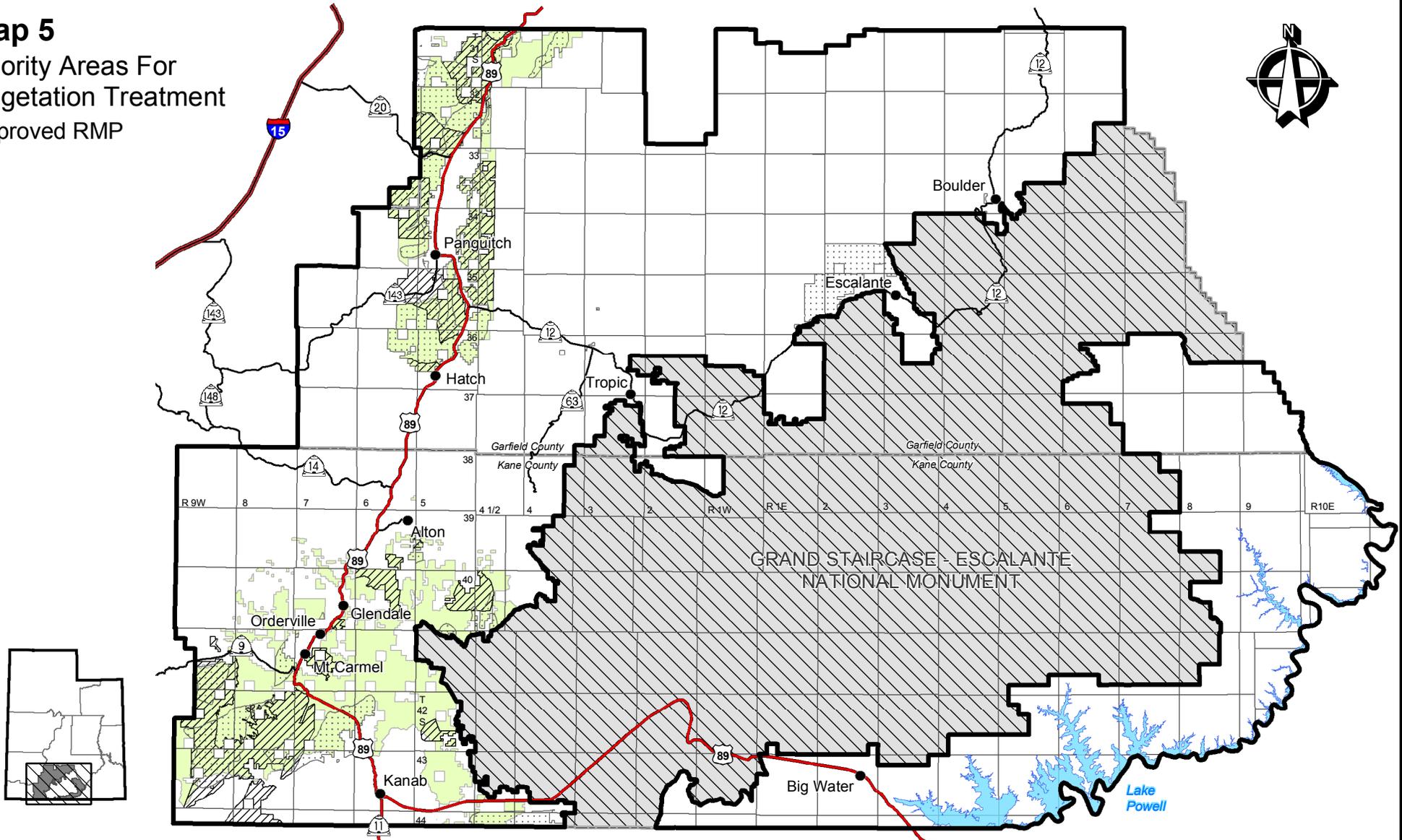
Source: Utah Division of Wildlife Resources 2006  
 Projection: UTM, Zone 12 North  
 Datum: North American Datum of 1983 (NAD83)  
 Kanab Field Office, GIS Program  
 October 2008



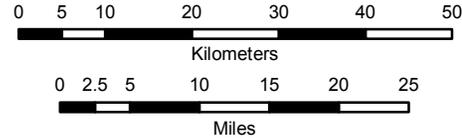
Surface disturbing activities are not excluded in these areas. All timing and controlled surface use limitations are subject to waivers, exceptions, and/or modification identified in Appendix 3.

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of this data for individual use or aggregate use with other data.

**Map 5**  
 Priority Areas For  
 Vegetation Treatment  
 Approved RMP



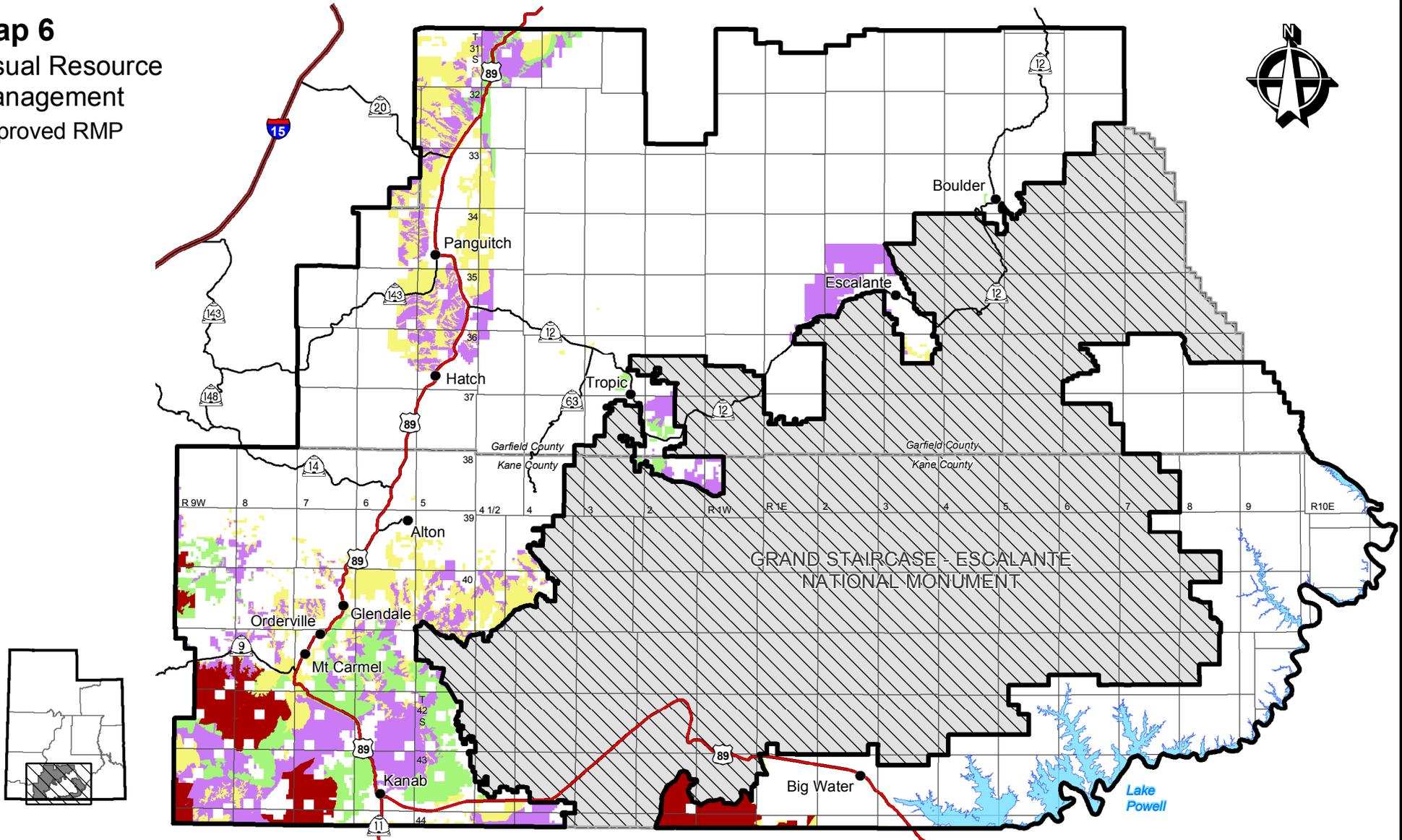
-  Wildlife Priority Treatment Areas
-  Livestock Grazing Treatment Areas
-  Soils/Watershed Priority Treatment Areas
-  Kanab Field Office
-  Interstate Highway
-  U.S. Highway
-  State Highway
-  Water
-  Towns



Projection: UTM, Zone 12 North  
 Datum: North American Datum of 1983 (NAD83)  
 Kanab Field Office, GIS Program  
 October 2008

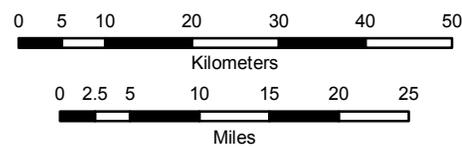
No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of this data for individual use or aggregate use with other data.

**Map 6**  
 Visual Resource  
 Management  
 Approved RMP



- Class I
- Class II
- Class III
- Class IV

- Kanab Field Office
- Interstate Highway
- U.S. Highway
- State Highway
- Water
- Towns

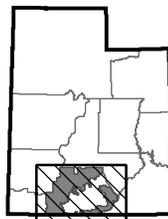
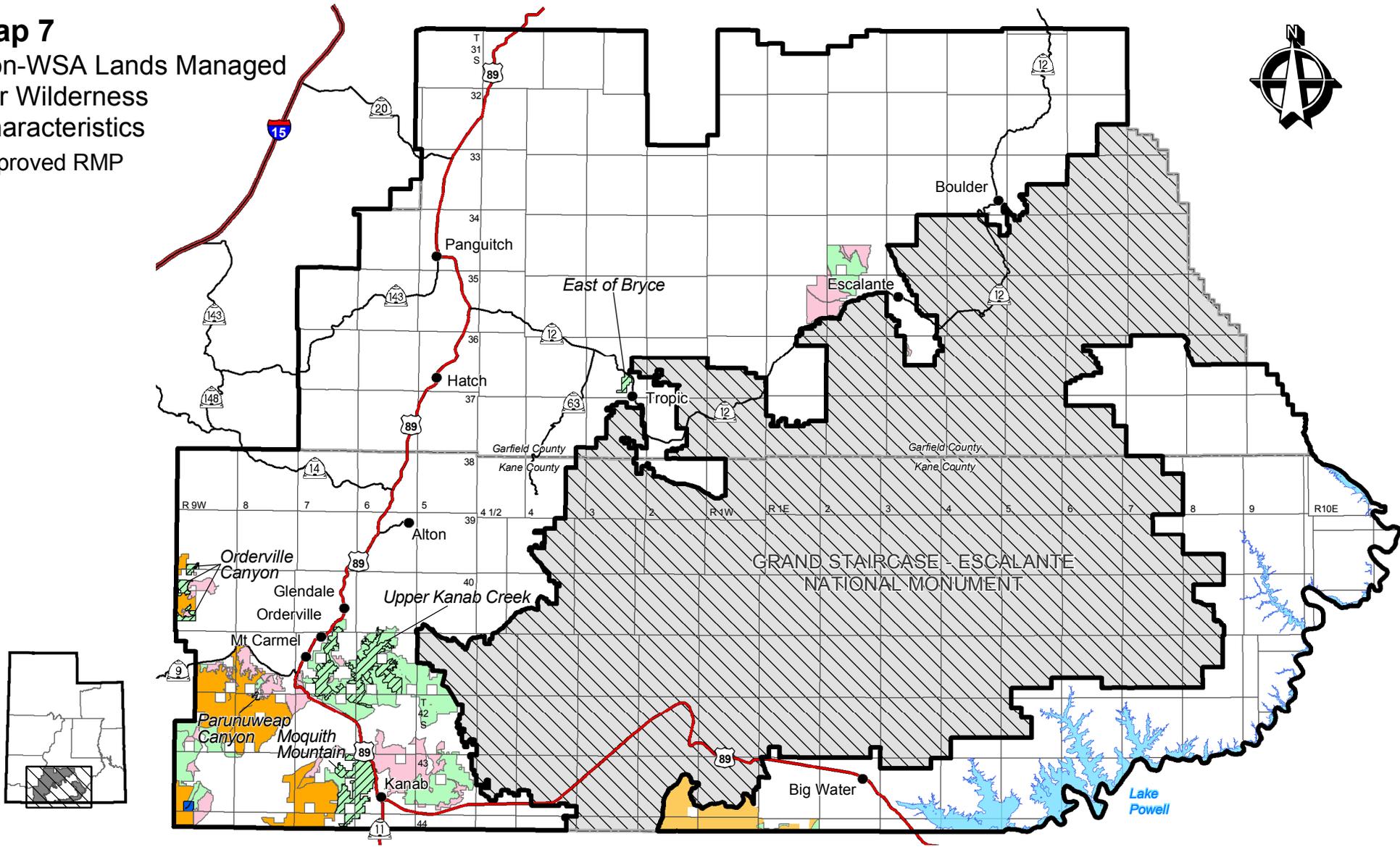


Projection: UTM, Zone 12 North  
 Datum: North American Datum of 1983 (NAD83)  
 Kanab Field Office, GIS Program  
 October 2008

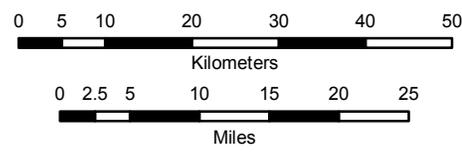


No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of this data for individual use or aggregate use with other data.

**Map 7**  
 Non-WSA Lands Managed  
 For Wilderness  
 Characteristics  
 Approved RMP



- |  |   |  |                    |
|--|---|--|--------------------|
|  | Non-WSA lands managed for Wilderness Characteristics            |  | Kanab Field Office |
|  | Lands Analyzed and found to have Wilderness Characteristics     |  | Interstate Highway |
|  | Lands Analyzed and found not to have Wilderness Characteristics |  | U.S. Highway       |
|  | Land Acquired through West Desert Land Exchange Act of 2000     |  | State Highway      |
|  | Existing Wilderness Study Areas                                 |  | Water              |
|  | BLM Wilderness Area   |  | Towns              |

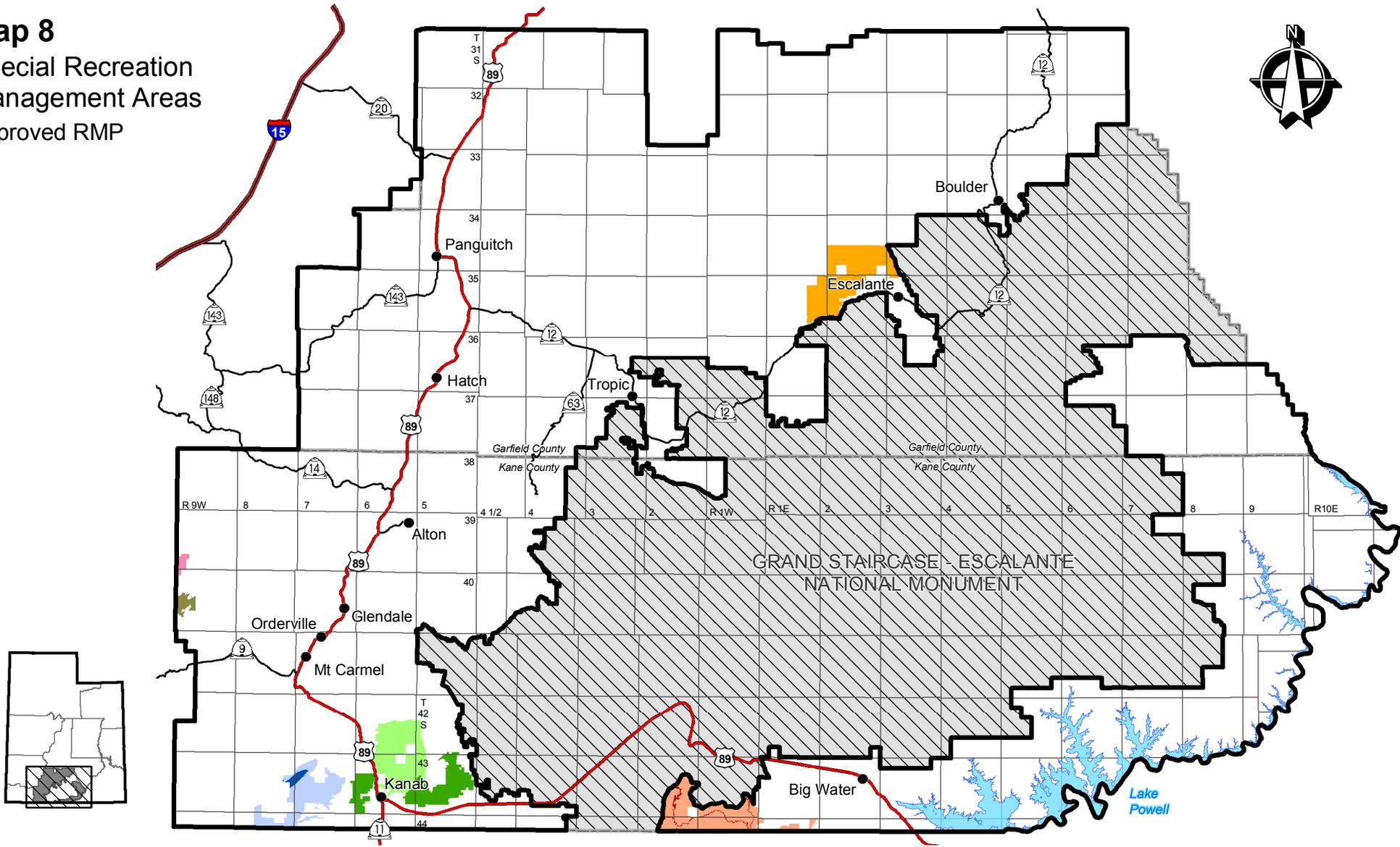


Projection: UTM, Zone 12 North  
 Datum: North American Datum of 1983 (NAD83)  
 Kanab Field Office, GIS Program  
 October 2008

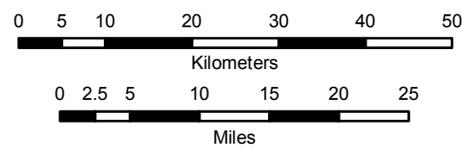


No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of this data for individual use or aggregate use with other data.

**Map 8**  
 Special Recreation  
 Management Areas  
 Approved RMP



- Escalante
- Kanab Community, Non Motorized RMZ
- Kanab Community, OHV RMZ
- Moquith Mtn, Non-Dunes Wooded RMZ
- Moquith Mtn, Dunes RMZ
- North Fork Virgin River
- Orderville Canyon
- Paria Canyon, Canyon RMZ
- Paria Canyon, Uplands RMZ
- Kanab Field Office
- Interstate Highway
- U.S. Highway
- State Highway
- Water
- Towns

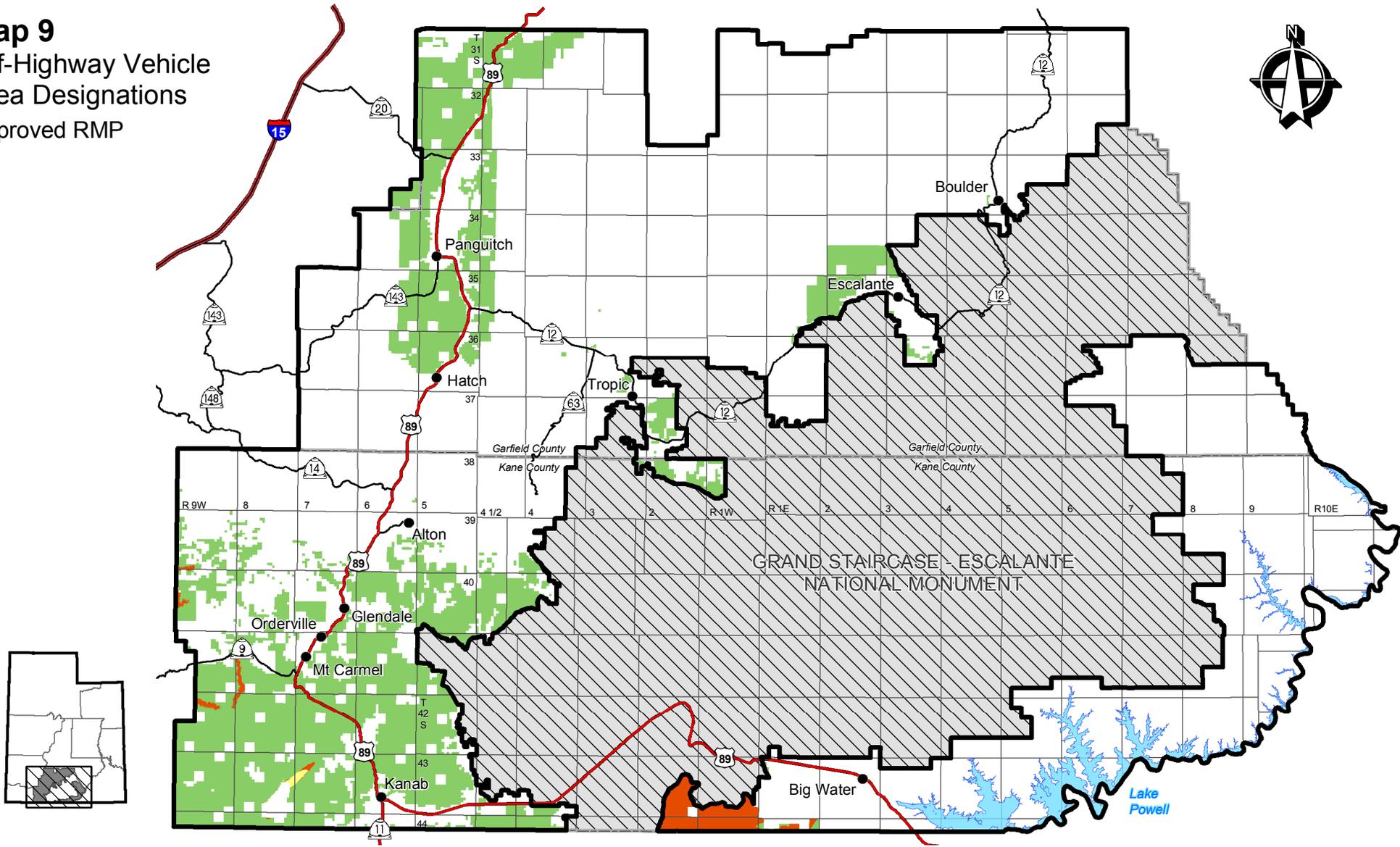


Projection: UTM, Zone 12 North  
 Datum: North American Datum of 1983 (NAD83)  
 Kanab Field Office, GIS Program  
 October 2008

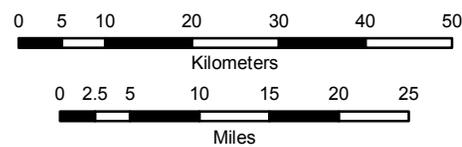


No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of this data for individual use or aggregate use with other data.

**Map 9**  
 Off-Highway Vehicle  
 Area Designations  
 Approved RMP



- Closed
- Limited to Designated Roads and Trails
- Open
- Kanab Field Office
- Interstate Highway
- U.S. Highway
- State Highway
- Water
- Towns



Projection: UTM, Zone 12 North  
 Datum: North American Datum of 1983 (NAD83)  
 Kanab Field Office, GIS Program  
 October 2008



No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of this data for individual use or aggregate use with other data.